A monthly summary of business conditions for Illinois

Illinois Business Review

BUREAU OF ECONOMIC AND BUSINESS RESEARCH / COLLEGE OF COMMERCE / UNIVERSITY OF ILLINOIS

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Highlights of Business in December

INDUSTRIAL OUTPUT picked up in December, with increased automotive production an important factor. The FRB index of production rose 0.7 percent to 132.8 (1967 = 100).

All categories of personal income rose in December, for an overall gain of 1.4 percent to $1.441 trillion. For 1976 as a whole the increase was 10.1 percent.

The BLS consumer price index was up another 0.4 percent in December to 174.3 (1967 = 100). From December 1975 to December 1976 prices increased 4.8 percent, compared with 7.0 percent in the previous 12-month period.

Unemployment Down Slightly

Unemployment declined by 211,000 in December to a total of 7.56 million; the rate fell from 8.1 percent of the civilian labor force to 7.9 percent. The figures dropped to 6.86 million unemployed and a rate of 7.3 percent in May as the recovery progressed, but the 12 months from December 1975 to December 1976 have seen only modest gains in reducing unemployment — 210,000 fewer out of work and a drop of 0.4 percentage point in the rate of unemployment. The December 1976 improvement brought about a slightly better situation for adult men, married men, household heads, adult women, and teenagers. The rate for black workers was unchanged.

Employment rose 222,000 in December to nearly 88.4 million and nonfarm payroll employment was up 257,000 to almost 80.0 million. This represents an addition of 3 million workers to the total employment rolls in the year and 2.2 million to nonfarm payroll employment.

Higher Retail Sales

Retail sales have shown more strength in recent months. Revised figures show an increase of 1.9 percent from October to November and preliminary figures indicate a further sharp gain of 3.1 percent in December after seasonal adjustment. The latest advance was the largest since March 1972. A 9.3 percent gain in car sales in December contributed handsomely to the upswing, but even without the automotive sector, the increase was 1.6 percent. Durables rose 3.7 percent in November and another 5.2 percent in December to $19.1 billion. Nondurables were up 1 percent in November and 2.1 percent in December to $38.2 billion.

Total December sales were 11 percent greater than those in December 1975. Durable goods showed an encouraging advance — 15 percent; nondurables rose 9 percent. With an increase of approximately 5 percent in consumer prices, the real gain in total volume for the year was about 6 percent.

Recovery in Auto Sales

US auto makers sold 8.6 million cars in 1976, 22 percent more than in depressed 1975. However, that was still only the sixth-best year for the industry. GM took nearly 56 percent of the domestic market, Ford 26 percent, Chrysler 15 percent, and AMC less than 3 percent (only about two-thirds of its 1975 share). Domestic-built cars accounted for 86 percent of the total US market. The Big 3 have been doing well in full- and intermediate-sized cars, and supplies of such vehicles have been relatively tight. Small cars, however, have lagged and dealers' inventories of those models have built up to such an excess that all domestic manufacturers have closed producing plants and laid off workers for varying periods.

American Motors has been especially hard hit because of its concentration on small cars. The company is pleading hardship as it begins to bargain with its workers, seeking to induce them to hold down their wage demands. Company officials have been criticized for sharply hiking executive compensation while asserting a lack of money for higher wages.

Economic Stimulus Proposed

The Carter Administration, alarmed by the continuing stagnation in economic activity, has proposed a program to stimulate the US economy without severely cutting government revenues on a permanent basis. The program includes a one-time tax rebate for individuals ($7 billion to $11 billion), federal spending to create jobs ($5 billion to $8 billion), public works projects ($4 billion), permanent tax reductions via higher minimum deductions ($4 billion), and tax relief for business ($2 billion). The two-year program would cost $12 billion to $16 billion in fiscal year 1977 and $13 billion to $16 billion in FY 1978. The program, which will have to win the approval of Congress, would raise the budget deficit to $70–$76 billion this year compared with one of $66 billion in FY 1976, the record previous deficit. The job-creating and public works projects are projected to add 800,000 to the employment rolls.

We regret that we are unable to publish this month the customary special article on a topic of current interest.

The Executive Development Center

EDUCATORS have long known that the higher one's level of prior education, the more likely one is to pursue further studies. In this context of "the more, the more," the outlook for increased enrollment in continuing education programs is excellent.

From 1969 to 1972 the number of participants in adult education in the United States rose 20.7 percent. About a third of this gain (6.4 percent) can be ascribed to the growth of the eligible population. The rest must be attributed to other factors, including recognition of continuing education activities as a way of meeting individual needs.

Of the 16 million adults who participated in educational activities in 1972, 46.5 percent were enrolled in occupational training programs. An additional 25.9 percent were enrolled in general education programs, many of which provide an opportunity to improve literacy, human interaction, and other skills applicable to the job setting.

The rapid obsolescence of information which provides professional competence is a fact of life and is evidenced by trends toward mandated professional relicensing and recertification and by voluntary commitments by people seeking new careers, upgrading in present careers, retraining because of technical obsolescence, or learning for the sake of learning. The trend is nowhere more evident than in business-related subjects.

The primary providers of continuing education for business and industry are (1) colleges and universities, (2) professional organizations, (3) noncollegiate postsecondary schools, and (4) community organizations. Colleges and universities typically lead the way in program content. With excellent resources at hand, they are able to meet the most pertinent and forward-looking concerns of the business world. Their programs address management — hence, the University of Illinois Executive Development Center and others such as the University of Wisconsin Management Institute. The leadership function of professional organizations includes devoting some of their resources to improving the performance of their memberships. The organization often sets policy and standards for the profession and helps its professionals meet those aims. Noncollegiate postsecondary schools include long and short courses and correspondence study. They address the needs of personnel at all levels. Community organizations offer a surprisingly large number of occupationally oriented courses. Of 321,000 courses offered in 1972, 17,500 provided occupational training.

The University of Illinois Program

The Executive Development Center (EDC) was established in 1958 by the Board of Trustees of the University of Illinois to complement the other elements of the College of Commerce and Business Administration. The EDC's assignment is to contribute to the effectiveness with which businesses, professional organizations, and government units serve their customers, employees, and the general public. The contribution is to be made through education in the context of the American enterprise system for practicing executives, administrators, and professional people.

In these times almost everyone is conscious of his environment. At the Executive Development Center we are conscious of an environment that spells opportunity for continuing education in business and related fields for Illinois businesspeople. The environment of which I speak consists of a prestigious faculty, a heavily industrialized state, a state that is "home" to tens of major financial institutions, and an obviously aggressive university support for continuing education. The challenge to the Executive Development Center is to make the most of the opportunities afforded by this environment.

The principal project of the Executive Development Center is also its longest-continuous-running program, the Executive Development Program. Attendance at the Executive Development Program has averaged 25 over the past 19 years. The fee for the 1977–78 session is $3,250.

Entering its 21st year in 1977, this program is targeted to develop applicable skills and techniques for the middle management executive of medium-sized and large corporations or the policy-level executives of small businesses. A rigorous, demanding schedule of classes coupled with case problems, buzz sessions, and substantial reading assignments make this program a memorable one for those who enroll. The results are commensurate to the commitment of the executive. The current class has attracted women and men from states with a wide geographic spread and from foreign countries.

In the five weeks (divided into two units over two summers) of the program, the following objectives are expected to be met: (1) improvement in the executive's ability to analyze and solve managerial problems through an exposure to the latest decision-making techniques, (2) sharpening of the executive's human relations skills through a better self-understanding and a more acute recognition of the motivations and needs of others, (3) improvement in the executive's ability to communicate at all levels of his organization, (4) development and expansion of the executive's awareness of and sensitivity to the many environmental forces affecting his organization, (5) broadening of the executive's understanding of the roles of the executive's peers in the structure of management and the framework within which the chief exec-

Continued on page 8

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Know your State: Illinois industries and resources

Commercial Job Printing

THE INFORMATIONAL NEEDS of business are well served by many printed materials, including financial reports, directories, catalogs, business forms, and advertising materials. In recent years more and more organizations and individuals have turned to print media as vehicles to disseminate information.

The emergence of commercial job printing actually occurred during the last few decades of the 19th century when new printing processes established commercial printing as a viable large-scale operation. Technology has long since been the most important element in the industry, with much of the change resulting from changes in methods of setting type. Hand composition was the sole method of typesetting for several centuries until the first commercial typesetting machines became available in the 1880s. Today computerized typesetting, cathode ray tube typesetters, and optical character reading equipment are in common use.

Industry Dimensions

Only the lumber products group has more establishments than commercial job printing. More than 22,000 commercial printers are dispersed throughout the country, more or less according to population density. The industry includes general print shops as well as plants specializing in printing magazines, newspapers, and periodicals for others. Also included are trade service firms that supply nonintegrated companies with special services, such as typesetting, platemaking, and binding.

Total employment in the industry continues to gain modestly each year. Current employment is estimated at 360,000, of which production workers constitute 78 percent.

Competition in the industry takes many forms. The quest for new or expanded markets, utilization of new technology, and exploration of new media formats exert considerable pressure on printing firms. Markets for the small and medium-sized printers tend to be local, while large establishments with highly specialized product lines may serve national markets. More than 80 percent of the printers in the US employ fewer than 20 workers.

Problems and Trends

The primary concerns of US commercial printers are the same as those of other manufacturing groups — energy, inflation, and materials shortages. Because of a generally rising level of prices, paper costs as well as the costs of pressroom chemicals, inks, platemetals, and other supplies will continue to increase in the near future. Printers' supply costs represent nearly 38 cents of each dollar of sales.

Probably the most notable postwar trend has been the vigorous growth in the utilization of lithography, a method by which images are transferred (or offset) from a thin metallic plate onto a receiving substance (usually paper) by means of a series of chemically prepared rollers. Lithographic dollar volume is now approximately 61 percent of the market, compared with 48 percent in 1967; letterpress dollar volume has shrunk to 25 percent of total commercial work, compared with 44 percent in 1967. Gravure and screen printing share the remainder. Despite technological improvements being made with polymer-type printing plates, it is not likely these factors will make commercial letterpress competitive with commercial lithography in the near future.

Major technological advances have been by far the most important force contributing to the growth of the commercial printing industry. The use of these technologies has resulted in increased productivity, greater quality control at a higher level of output, and more flexibility in what is produced and the manner of its production. This trend indicates that large commercial printers will probably prosper at the expense of the smaller variety shops.

Innovation has had important implications for manpower. Some printing occupations, such as typesetters, have decreased in number, but others — printing press operators, lithographic platemakers, and computer-related occupations — have increased. Moreover, skill requirements are changing significantly, making retraining increasingly necessary. These developments are contributing to the gradual integration of composition, printing, and binding operations into one system which can be fully computerized. These changes, however, have not reduced employment overall because of the offsetting demand for labor created by growth in output.

Commercial Printing in Illinois

Illinois is the nation's second largest commercial printing center, trailing only New York in volume of production. With nearly 44,000 employees, the 1,300 plants in this State turn out an annual product valued at more than $1 billion, nearly 12.5 percent of the national total. The State accounts for nearly 13 percent of total industry employment. Illinois ranks first in catalog and directory printing as well as in magazine and periodical printing.

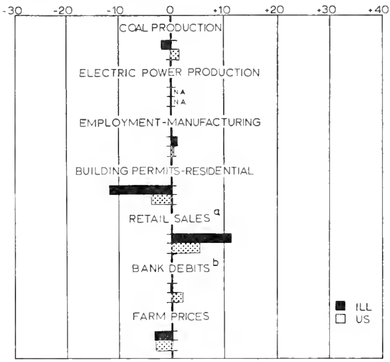
Geographically, more than 80 percent of the state's commercial job printers are located in the Chicago area, where production accounts for more than 80 percent of value added by printing for the State. The city's central location makes it an economically desirable shipping point for national distribution. Extensive printing of books, telephone and business directories, catalogs, encyclopedias, advertising folders, and magazines is done in this area. The city ranks second nationally among major urban centers in number of establishments and workers.

Peoria County ranks second in printing employment for the State. The county's facilities include two plants that employ more than 350 workers each. Statewide there are 75 plants employing more than 100 workers each.

Statistical Summary of Business Activity

Selected Indicators

Percentage changes, October 1976 to November 1976



[a] September 1976 to October 1976. [b] Seasonally adjusted. N.A. Not available.

Illinois Business Indexes

Item	Nov. 1976 (1967 = 100)	Percentage change from Oct. 1976	Percentage change from Nov. 1975
Employment — manufacturing[1]	85.6[a]	+ 1.2	+ 1.3
Weekly earnings — manufacturing[1]	194.1[a]	+ 3.7	+ 8.9
Consumer prices in Chicago[2]	168.5	+ 0.2	+ 4.9
Life insurance sales (ordinary)[3]	219.4	+ 3.5	+19.9
Retail sales[4]	219.7[b]	+11.2	+10.6
Farm prices[5]	178.0	− 3.3	−12.8
Bank debits[6]	390.9[c]	− 0.1	+11.3
Building permits — residential[4]	105.3	−11.7	+70.7
Electric power[7]	n.a.		
Coal production[8]	93.9	− 1.8	+ 7.0
Petroleum production[9]	43.7	− 3.3	+ 7.8

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Fed. Res. Bd.; [7] Fed. Power Comm.; [8] Ill. Dept. of Mines; [9] Ill. Geol. Survey.
[a] Preliminary. [b] Data for October 1976 compared with September 1976 and October 1975. [c] Seasonally adjusted. n.a. Not available.

United States Monthly Indexes

Item	Nov. 1976	Percentage change from Oct. 1976	Percentage change from Nov. 1975
	Annual rate in billion $		
Personal income[1]	1,417.8[a]	+ 1.1	+ 9.0
Manufacturing[1]			
Sales	1,205.5[a, b]	+ 2.9	+11.0
Inventories	166.9[a, b, c]	+ 0.1	+ 6.9
New construction activity[1]			
Private residential	69.5	− 1.4	+32.2
Private nonresidential	53.8	− 0.1	+ 8.0
Total public	35.8	− 9.8	−16.9
Foreign trade[1]			
Merchandise exports	114.4	− 4.0	+ 1.2
Merchandise imports	132.7	+10.2	+39.9
Excess of imports	18.3	+1,285.4	....
Instalment credit[2]			
Extended	189.2[a]	− 1.8	+ 8.1
Liquidated	174.2[a]	+ 0.2	+ 9.5
Business loans[2]	126.7[c]	+ 0.6	− 3.7
Cash farm income[3]	115.0	− 6.6	+ 4.8
	Indexes (1967 = 100)		
Industrial production[2]			
Combined index	132[a]	+ 1.2	+ 6.9
Durable manufactures	124[a]	+ 2.3	+ 9.7
Nondurable manufactures	143[a]	+ 0.4	+ 4.6
Minerals	115[a]	− 0.7	+ 0.7
Manufacturing employment[4]			
Production workers	96	+ 0.7	+ 3.5
Factory worker earnings[4]			
Average hours worked	99	+ 0.8	+ 0.5
Average hourly earnings	189	+ 1.3	+ 8.5
Average weekly earnings	188	+ 2.1	+ 9.1
Building permits — residential[1]	114	− 3.6	+56.2
Retail sales[1]	214[d]	+ 5.3	+ 7.6
Consumer price index[4]	174	+ 0.3	+ 5.0
Wholesale prices[4]			
All commodities	186	+ 0.2	+ 4.2
Farm products	184	− 1.6	− 4.2
Processed foods and feeds	175	− 0.1	− 4.3
Industrial commodities	187	+ 0.4	+ 6.6
Farm prices[3]			
Received by farmers	173	− 2.8	− 6.0
Paid by farmers	193	− 0.5	+ 4.9
Parity ratio	66[e]	− 2.9	−10.8

[1] US Dept. of Commerce; [2] Federal Reserve Board; [3] US Dept. of Agriculture; [4] US Bureau of Labor Statistics.
[a] Seasonally adjusted. [b] Revised series. [c] End of month. [d] Data for October 1976 compared with September 1976 and October 1975. [e] Based on official indexes, 1910–14 = 100.

United States Weekly Business Statistics

Item		1976 Dec. 18	1976 Dec. 11	1976 Dec. 4	1976 Nov. 27	1976 Nov. 20	1975 Dec. 20
Production:							
Bituminous coal	thous. short tons	13,935	13,650	12,915	11,795	14,115	12,870
Electric power by utilities	mil. kwh.	41,885	42,630	42,622	38,248	39,955	39,554
Passenger cars	number in thous.	212	206	203	113	190	169
Petroleum (daily avg.)	thous. bbl.	8,070	8,070	8,070	8,101	8,054	8,236
Steel, raw	thous. short tons	2,144	2,135	2,090	2,084	2,210	2,069
Rail freight, revenue ton-miles	bil.	15.7	15.8	15.4	13.5	16.3	14.3
Retail sales	mil. dol.	15,808	14,837	14,390	13,074	13,323	14,605
Prices:							
Wholesale, 22 commodities	1967 = 100	199.6	200.2	197.3	198.2	198.2	189.7
400 industrial stocks (Standard & Poor's)	1941–43 = 10	116.75	115.65	114.13	114.20	112.30	99.88
Finance:							
Bond yields, domestic corporate (Moody's)	percent	8.47	8.44	8.50	8.54	8.60	9.46
Business loans	mil. dol.	116,496	115,481	115,507	115,048	114,702	120,116
Failures, industrial and commercial	number	164	187	160	171	169	203

Source: *Survey of Current Business, Weekly Supplement.*

Here and there in the nation's economy

Recent Economic Changes

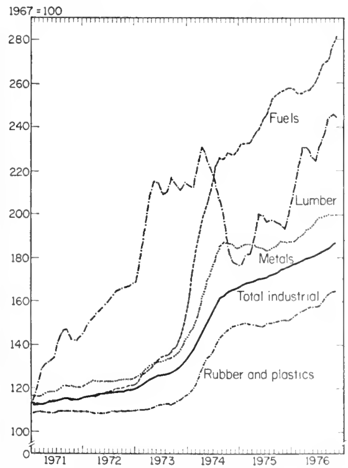
Business Conditions Digest Revised

MAJOR REVISIONS have been made by the US Department of Commerce Bureau of Economic Analysis in its monthly *Business Conditions Digest*. Greater emphasis is placed on the cyclical indicators section, with 32 additional indicators included, for a total of 111. However, the same series are still used to compute the composite indexes of leading, coincident, and lagging indicators. Innovations in the method of constructing the three composites enhance the comparability among them. A forthcoming supplement to *Business Conditions Digest* will show in detail the methods used to compute the composites plus historical data and descriptions of the series.

Slower Rise in Industrial Prices

FOR THE PAST SEVERAL MONTHS, sharp advances in the BLS wholesale price index for industrial commodities have caused considerable concern. From June through November 1976, the index of industrial prices rose not less than 0.5 percent each month and by 0.9 percent one month. The largest increases continued to show up in such basic commodities as fuels, lumber, metals and products, and rubber and plastic products (see chart). In the two years from November 1974 (after the steep climb subsequent to the oil price hike) to November 1976, fuels increased 24 percent. Gas fuels more than doubled in price; petroleum products and electricity rose about one-fifth, and coal prices declined somewhat. The advance in machinery prices was led by the agricultural and construction machinery groups. Metals prices reflected mainly the increases for ferrous metals. Below-average advances in such categories as chemicals, textiles, and furniture have served to moderate the upward movement in the overall index for industrial commodities.

Selected Wholesale Industrial Prices



Source: US Bureau of Labor Statistics.

BLS Revises Projections to 1985

AS A RESULT of the 1974–75 recession and the substantial shift in the US energy outlook, the US Bureau of Labor Statistics has revised its projections of the economy for 1980 and 1985. The revisions reflect the current BLS assumptions about unemployment, labor productivity, and government taxes and expenditure as these affect the BLS projections of long-term trends in employment and industrial output. The BLS has published a "basic version" and two alternatives using different assumptions. The November 1976 *Monthly Labor Review* presents growth projections for domestic output and for civilian employment, both by industry. A second article projects changes in employment by occupation from 1974 to 1985.

Among the industries projected to increase output at an average annual rate of 5 percent or more between 1973 and 1980 and between 1980 and 1985 are public utilities construction; plastic materials and synthetic rubber; drugs; engines, turbines, and generators; computers and peripheral equipment; telephone and telegraph apparatus; electronic components; medical and dental instruments; and health services and hospitals.

Among occupations, the largest advances are expected to be in the employment of health technologists and technicians and in computer specialists.

Contract Bargaining in 1977

LIKE 1976, 1977 will be a major bargaining year for labor unions. The US Department of Labor lists 1,033 major contracts expiring this year, covering more than 4.7 million workers. In addition, 46 scheduled wage reopenings cover 172,000 workers. The three industries with the most employees involved will be construction (634,000 workers covered by contracts being negotiated from April through June), communications (700,000 Bell System workers negotiating in August), and primary metals (427,000 workers bargaining in August, 110,000 of them at US Steel). Longshoremen will be negotiating East and Gulf Coast agreements in September. Contract talks for 125,000 United Mine Workers and 470,000 railway employees will be under way late in 1977.

Other reports indicate that job security, in the manner of the United Auto Workers contract last fall, is likely to be the big issue this year.

Continued on page 8

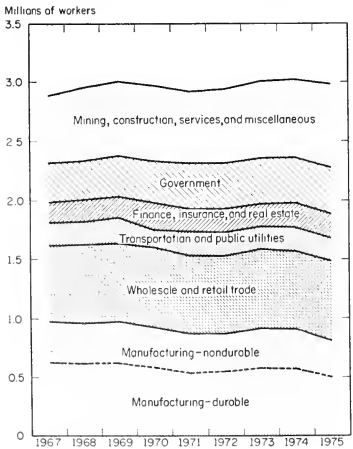
Local Illinois Developments

Chicago Aids Home Loan Project

THE CITY OF CHICAGO and a nonprofit organization have begun a shared-risk program to make up to $7 million available over a two-year period for conventional low-down-payment mortgage loans in seven neighborhoods — South Shore, Rogers Park, Austin, Lawndale, Uptown, Woodlawn, and Grand Boulevard. The Chicago Home Purchase and Rehabilitation Plan will be administered by the Community Services and Research Corporation and funded by 20 participating banks and savings and loan associations to finance the purchases of up to 400 homes. The city will provide a $75,000 grant for the program's first year; the second year's operating capital will come from interest on a $500,000 contingency fund.

Prospective home buyers can make preliminary application at several Chicago Model Cities offices. If applicants appear financially qualified after local staff prescreening, they will be referred to a savings and loan association where formal application will be made. Borrowers seeking to purchase single-family homes must produce a down payment equivalent to 8 percent of the total house cost plus repair expenses. Those seeking to buy multiunit buildings must make a 20 percent down payment. Interest rates will not be subsidized. In addition, mandatory training and counseling on home ownership and repairs are key parts of the program.

Nonfarm Employment in Chicago SMSA



Source: Chicago Mayor's Council of Manpower and Economic Advisors.

Downtown Renewal Takes Place

ALMOST EVERY MAJOR SUBURB in Cook and adjoining counties is proposing, considering, or implementing plans to rejuvenate local central business districts in order to lure both retailers and consumers back to downtown shopping areas, thus preserving and, it is hoped, expanding the tax bases of these areas. Some of the major efforts proposed or under way to upgrade deteriorating suburban downtowns include the following:

Aurora — 100 acres of its downtown are being transformed into an elaborate cultural, civic, and commercial center. Renovation of the city's downtown bridges across the Fox River has recently been completed.

Des Plaines — A $12 million office and enclosed mall complex is being constructed in the downtown area.

St. Charles — In conjunction with a private developer, St. Charles is planning a commercial-residential complex, including a pedestrian mall bordered by retail shops and townhouses adjacent to the Fox River.

Chicago Heights — In addition to general remodeling of downtown office buildings, a new six-story building for the First National Bank of Chicago Heights was recently completed in a former skid row area.

Joliet — A semipedestrian mall for Chicago Street to include fewer traffic lanes, more sidewalk area, decorative street lights, and a plaza is being considered.

La Grange — A two-block pedestrian shopping mall was completed last summer at a cost of $900,000.

Other suburbs planning or implementing major downtown renewal efforts include North Chicago, Elgin, Oak Park, Arlington Heights, West Chicago, Waukegan, Naperville, and East Dundee.

Chicago Employment Inches Upward

FROM 1967 to 1975, annual average nonagricultural employment in the Chicago SMSA rose only from 2.89 million to 2.98 million, an increase of 3 percent (see chart). For the US in the same period, it rose 16.9 percent. Chicago manufacturing registered an absolute decline of 159,000 workers, a net loss of 16.3 percent; durables fell 18.7 percent and nondurables fell 11.9 percent. Also, the percentage of workers employed in manufacturing fell from 33.6 percent of nonfarm employment in 1967 to 27.3 percent in 1975. Employment in mining, and transportation and public utilities also showed declines over the period. Of the sectors showing employment gains, government and services and miscellaneous industries increased more than 20 percent; finance and real estate increased 15.6 percent. Wholesale and retail trade employment rose 5.9 percent.

More information concerning the employment situation in the Chicago SMSA is available in *Unemployment — Labor Force Policy: A Special Report of the Mayor's Council of Manpower and Economic Advisors,* Chicago Civic Center, Room 302, Chicago 60602.

Comparative Economic Data for Selected Illinois Cities, November 1976

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Bank debits[4] (000,000)	Estimated work force unemployed[5] (percent)
ILLINOIS		$87,658[a]	3,199.6[a]	$45,059[a]	$2,103,383[a]	6.8[b]
Percentage change from	Oct. 1976	+30.9	+1.8	−6.0	−0.1	
	Nov. 1975	+108.7	n.a.	+24.6	+11.3	
NORTHERN ILLINOIS						
Chicago		$28,807	1,579.5	$34,985		
Percentage change from	Oct. 1976	+18.4	+0.2	−5.2		
	Nov. 1975	+167.2	+6.6	+24.9		
Aurora		$ 1,588	146.0	$ 451	$2,011,946[b]	6.8[b]
Percentage change from	Oct. 1976	−38.2	+31.9	−7.2	+0.0	
	Nov. 1975	+124.1	+22.2	+26.7	+11.4	
Elgin		$ 1,978	77.2	$ 579[c]		
Percentage change from	Oct. 1976	+13.1	+1.3	+0.5		
	Nov. 1975	−78.8	+13.2	+54.0		
Joliet		$ 1,316	352.5	$ 348		
Percentage change from	Oct. 1976	−86.7	+1.7	+9.4		
	Nov. 1975	+16.6	+15.9	+35.9		
Kankakee		$ 245	69.4	$ 203[c]	n.a.	n.a.
Percentage change from	Oct. 1976	+51.1	+4.0	−5.6		
	Nov. 1975	+108.2	+5.8	+15.3		
Rock Island-Moline		$ 9,092	106.0	$ 996[d]	$ 19,495[b]	5.3[b]
Percentage change from	Oct. 1976	+203.2	+11.9	−9.1	+1.7	
	Nov. 1975	+308.4	+5.5	+37.2	+13.5	
Rockford		$ 2,652	144.9	$ 880	$ 11,524[b]	6.9[b]
Percentage change from	Oct. 1976	+19.2	−0.6	+8.2	−6.5	
	Nov. 1975	+115.8	+10.5	+16.4	+22.2	
CENTRAL ILLINOIS						
Bloomington-Normal		$ 4,429	41.7	$ 807	$ 8,234[b]	3.6[b]
Percentage change from	Oct. 1976	−14.5	+3.5	+6.3	+2.9	
	Nov. 1975	+170.2	n.a.	+17.5	+15.5	
Champaign-Urbana		$ 3,882	45.2	$ 619	$ 6,706[b]	4.3[b]
Percentage change from	Oct. 1976	+117.1	−8.1	−11.6	+20.9	
	Nov. 1975	+591.5	n.a.	+16.4	+10.5	
Danville		$ 1,950	39.7	$ 476	$ 2,674	n.a.
Percentage change from	Oct. 1976	+358.3	+7.3	+24.9	−0.9	
	Nov. 1975	+474.8	n.a.	+20.2	+34.6	
Decatur		$ 5,046	106.4	$ 444	$ 7,081[b]	8.4[b]
Percentage change from	Oct. 1976	+12.1	+0.8	+5.5	−12.4	
	Nov. 1975	+300.8	n.a.	+22.7	+1.6	
Galesburg		$ 1,195	28.3[c]	$ 169	n.a.	n.a.
Percentage change from	Oct. 1976	+139.6	+2.5	+8.3		
	Nov. 1975	+21.5	n.a.	+44.4		
Peoria		$ 6,621	169.3	$ 1,483	$ 16,632[b]	4.9[b]
Percentage change from	Oct. 1976	+91.3	−3.5	+4.3	−4.8	
	Nov. 1975	+36.9	−1.6	+33.4	−3.0	
Quincy		$ 377	40.9	$ 214	$ 2,938	n.a.
Percentage change from	Oct. 1976	−23.9	+7.9	+7.0	−0.6	
	Nov. 1975	−30.6	+13.9	+14.4	+20.4	
Springfield		$16,662	103.3	$ 1,591	$ 16,153[b]	5.6[b]
Percentage change from	Oct. 1976	+204.7	+5.9	−9.6	+2.9	
	Nov. 1975	+426.0	+10.2	+26.7	+8.1	
SOUTHERN ILLINOIS						
East St. Louis		$ 47	25.1	$ 165	n.a.	
Percentage change from	Oct. 1976	−70.6	−4.2	−1.2		
	Nov. 1975	−89.6	−1.6	+15.4		
Alton		$ 56	70.9	$ 125	n.a.	7.1[e]
Percentage change from	Oct. 1976	−83.8	−7.0	+11.6		
	Nov. 1975	+35.4	+1.4	+25.0		
Belleville		$ 746	21.1	$ 242	n.a.	
Percentage change from	Oct. 1976	+266.4	−6.2	+3.0		
	Nov. 1975	−14.4	n.a.	+28.7		
Carbondale-Murphysboro		$ 970	32.2	$ 282	n.a.	n.a.
Percentage change from	Oct. 1976	+99.5	+11.0	−5.7		
	Nov. 1975	−26.8	+32.0	−31.9		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 3 December 1976. [4] Federal Reserve Board; seasonally adjusted. [5] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Madison and St. Clair counties. n.a. Not available.

Illinois Business Review
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The Executive Development Center

Continued from page 2

utive officer makes decisions related to operations and policy.

Other Executive Development Center programs have been conducted in cosponsorship with trade associations and industrial firms including the DeKalb Agricultural Association, the American Water Works Association, the Illinois Savings and Loan League, Magnavox, and the National Association of Mutual Insurance Companies. The Automotive Service Industry Association (ASIA) executive development seminar has been conducted annually since 1961.

In a typical year, 17 different programs were conducted in six different cities throughout the State. The average length was three days, but some lasted as long as two weeks. The programs included a management development seminar for the Rockford School of Medicine, the National Schools for State Savings and Loan Examiners, and a National Symposium on Consumerism.

Efforts to establish closer ties between the business community and the College of Commerce and Business Administration include the Executive-in-Residence program and the Specialized Business Lectures.

One clue to perceived needs is the drawing power of specific programs offered by peer institutions. However, the most usable help is that provided by direct contacts with individual businesspeople from organizations of all sizes. We are regularly in contact with prospective customers for our services, asking them to define their educational requirements for us.

Designing short courses to meet perceived needs of business or governmental units is but one part of the Center's assignment. In a great university where distinguished faculties are assembled, faculty time is a valuable commodity. Frequently an opportunity for extra compensation (these programs must be self-supporting; income must cover expenses and faculty involvement must be outside the scheduled services for which faculty members are compensated by state-paid salaries) is not enough to attract a faculty member to teach a short course. There must, in many cases, be (1) the attraction of applying research or conducting research, (2) a recognized self-renewal benefit from interacting with persons discharging significant management functions in the "real world," or (3) a desire to perform a needed public service. In some cases there is not available locally a faculty member whose training provides the special expertise called for; then we reach out to another institution or to a consultant to meet that particular assignment. Our obligation to the university, to ourselves, and to our short course enrollees is to offer only programs that merit the label "excellent." This is the assured course by which persons move from present levels of competence to required or desired new levels.

Since becoming director of the Executive Development Center in August, I have gained the appellation "bridge builder" because of my frequent expressions of desire to build "bridges" to many constituencies with which the EDC is involved — faculty, alumni, university staff, businesspeople, and in some particulars the Urbana-Champaign business community. Early meetings with local chamber of commerce executives, banking officers, and some entrepreneurs have identified particular educational training needs which we will endeavor to satisfy. Other needs are undoubtedly yet unrecognized by us. The Executive Development Center is genuinely desirous of having suggestions as to how we may expand our services to the business community. We would appreciate a call to 333-4552 or a note addressed to 205 David Kinley Hall.

ROBERT H. NELSON
Director, Executive Development Center, UIUC

Recent Economic Changes

Continued from page 5

Cars Boost Manufacturers' Orders, Sales

A SUBSTANTIAL INCREASE in orders for new cars was the chief factor in the 1.2 percent rise in new factory orders in November. The 24 percent hike in cars reflected mainly the end of the Ford strike. The advance in orders to a seasonally adjusted $100.9 billion followed a gain of 0.8 percent in October. New orders for durables were up 1.8 percent to $52.0 billion. Aside from the automotive increases, durables were not especially strong; one element causing concern is the continuing anemia in non-defense capital goods orders, which were down 10 percent in November. Orders for nondurables were up 0.6 percent to $48.9 billion.

The automotive industry also accounted for the 2.9 percent gain in manufacturers' shipments in November to $100.5 billion. Sales had declined in September and October. Factory inventories rose only a slight 0.1 percent in November, a figure much more satisfactory to manufacturers than the advances of 0.6 percent to 1.1 percent in the preceding three months.

The US Department of Commerce has made substantial revisions in its method of computing these series, including an updating of the benchmarks used.

A monthly summary of business conditions for Illinois

Illinois Business Review

BUREAU OF ECONOMIC AND BUSINESS RESEARCH / COLLEGE OF COMMERCE / UNIVERSITY OF ILLINOIS

Volume 34
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February 1977

Highlights of Business in January

INDUSTRIAL OUTPUT fell back in January as the worst weather in years and a worsening shortage of natural gas closed factories, stores, and offices and affected the movement of people and goods. The FRB index dropped 1.0 percent after seasonal adjustment to 131.5 (1967 = 100). It was the sharpest cut since February 1975. Declines were widespread; only utilities showed greater output than in December.

Personal income was not severely affected, but consumption spending is likely to shift noticeably as consumers have to allocate more to food and fuel costs. It is generally expected that effects will be felt throughout the first quarter, with economic activity picking up again in the second quarter.

The cold weather also contributed to the sharpest rise in consumer prices in 18 months. The BLS index rose 0.8 percent (seasonally adjusted) to 175.3 (1967 = 100). Increases were widespread, affecting virtually all components of the index. Food, housing, and transportation showed approximately average advances. One of the largest rises reported for the month was the 2 percent hike for fuel oil and coal.

Amount of Unemployment Uncertain

The unemployment rate dropped from 7.8 percent of the labor force in December to 7.3 percent in January. However, the survey was made in the week ending 15 January, before fuel shortages started closing factories and businesses. A decrease of 440,000 in the labor force was thought by many analysts to show the effect of the cold weather in keeping workers from seeking jobs. The labor force reduction was a major factor in the drop of 560,000 in unemployment to 7 million. By early February, however, the weather was blamed for the idleness of as many as 1.5 million additional workers. New York and Ohio were especially hard hit.

Wholesale Prices Continue Rise

Prices of commodities at wholesale increased 0.5 percent in January after seasonal adjustment to 188.0 percent of the 1967 base. That advance was about in line with those of the past few months. Farm product prices rose 1.1 percent, but processed foods and feeds were off 0.2 percent. Industrial commodities were up 0.5 percent compared with 0.3 percent in December and 0.7 percent in November.

As in the case of employment data, price information was gathered before the harsh January storms and the likely effects are variously described. The US Department of Commerce senior economist expects a price run-up in February and March, but not to a serious degree. A private forecasting firm, however, now projects a rise in the WPI of 8 to 9 percent instead of the 6.9 percent projected earlier. Fertilizer, industrial chemicals, synthetic rubber, and plastics — all based on natural gas or petroleum — are expected to show the largest hikes.

Retail Sales Decline

The unusually cold weather in January also affected retail sales, which dropped for the first time in four months. The seasonally adjusted 2 percent decline to $56.6 billion reflected cuts of 3.3 percent in durables and 1.4 percent in nondurables. Automobiles, which had been enjoying particularly strong sales, suffered most from the severe weather, falling 6.4 percent from the December level. There was some indication that total sales picked up again in the first week of February.

On a year-to-year basis, retail sales were up 10 percent in January — 14 percent for durables and 8 percent for nondurables. Given the changes in the consumer price index, these gains would indicate advances of 5 to 7 percent in real volume of retail sales.

Fairly Healthy Profits

An early survey by the *Wall Street Journal* of the fourth-quarter profits of 470 corporations indicates an increase of 19.1 percent over the similar period in 1975. In the third quarter, the year-to-year gain was 17 percent. These advances were substantially less than those of the first two quarters of 1976, but the first-half comparisons were made with 1975 quarters affected by the recession.

The slower growth in profits in the second half of 1976 also reflected the general sluggishness of the economy. As measured by the real gross national product, the rate of growth in the final quarter was only about a third of that in the first quarter of 1976.

The largest percentage gain in the fourth quarter was shown by farm equipment manufacturers, which nearly tripled profits from fourth quarter 1975 to fourth quarter 1976. Six industries — autos and equipment, electrical equipment-electronics, petroleum products, tools and machinery, utilities, and banks — showed gains of one-fourth or more over the last quarter of 1975. Makers of chemicals, steel, and textiles had lower profits than in the year-earlier period.

On Central Business Districts *By Richard M. Hill* / *Page 8*

Here and there in the nation's economy

Recent Economic Changes

GNP — Fourth Quarter

GROSS NATIONAL PRODUCT rose \$38.7 billion in the fourth quarter of 1976 to a seasonally adjusted annual rate of \$1,748.5 billion. Personal consumption expenditures rose \$29 billion to \$1,117.5 billion. This followed a gain of \$23.8 billion in the previous quarter. Final sales were up 2.7 percent in current dollars seasonally adjusted. The increase followed gains of 2.1 percent and 2.3 percent in the two preceding quarters. Final sales rose \$148 billion in 1976 compared with \$128.5 billion in 1975.

In 1972 dollars, output rose from \$1,272.2 billion in the third quarter to \$1,281.5 billion in the fourth. Prices rose at an annual rate of 5.8 percent as measured by the GNP chain price index, compared with 4.6 percent in the third period and 5.4 percent in the second.

GROSS NATIONAL PRODUCT
(Billions of dollars)

	1976[a]	1975	4th qtr. 1976[b]
Gross national product	1,692.4	1,516.3	1,748.5
Personal consumption	1,078.6	973.2	1,117.5
Durable goods	156.3	131.7	161.2
Nondurable goods	440.3	409.1	455.5
Services	482.0	432.4	500.8
Domestic investment	241.2	183.7	249.0
New construction	121.6	101.8	131.4
Producers' durable equipment	106.1	96.4	109.7
Change in business inventories	13.5	−14.6	7.9
Nonfarm inventories only	13.6	−17.6	8.9
Net exports of goods and services	6.9	20.5	5.2
Government purchases	365.8	339.0	376.8
INCOME AND SAVING			
National income	1,349.4	1,207.6	n.a.
Personal income	1,375.4	1,249.7	1,422.1
Disposable personal income	1,181.8	1,080.9	1,216.9
Personal saving	77.8	84.0	72.9

Source: US Department of Commerce.
[a] Preliminary.
[b] Preliminary; seasonally adjusted annual rates.
n.a. Not available.

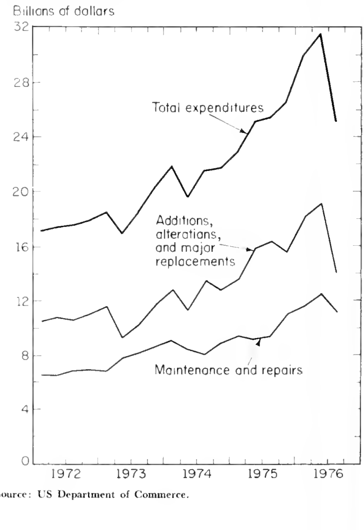
Advances in Industrial Production

FOR the 1976 calendar year industrial production averaged 129.8 on the FRB index, up 10.2 percent from the 1975 average. Most of the year's increase occurred prior to the pause in production of summer and early autumn. By the end of the year, output had crept a little above the previous high in June 1974. Consumer goods were above the earlier high — mainly on the strength of nondurables, which were well ahead. Materials output and business equipment have still not recovered all the ground lost in the 1974–75 downturn.

Expenditures on Residential Improvements

TOTAL EXPENDITURES for the upkeep and improvement of residential properties in the third quarter of 1976 showed the sharpest drop in several years (see chart). The latest Census Bureau report shows spending at a seasonally adjusted annual rate of \$25.1 billion. This was down nearly 21 percent from the previous quarter and down 2.3 percent from the corresponding quarter of 1975. The largest decline was in construction improvements and especially in additions and alterations. Such projects were off 34.3 percent from the second quarter (35.2 percent in constant dollars) and 24.8 percent from the third quarter of 1975 (31.3 percent in constant dollars).

Expenditures on Residential Improvements
(Seasonally adjusted annual rates)



Source: US Department of Commerce.

Illinois Business Review

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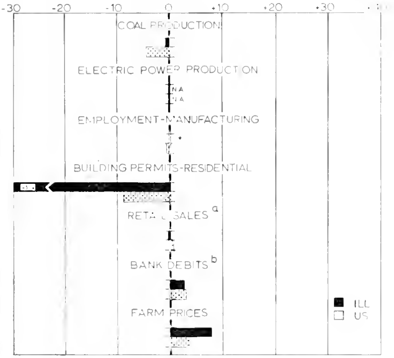
The material appearing in the *Illinois Business Review* is derived from various primary sources and compiled by the Bureau of Economic and Business Research. Its chief purpose is to provide businessmen of the State and other interested persons with current information on business conditions. Signed articles represent the personal views of the authors and not necessarily those of the University or the College of Commerce. The *Review* will be sent free on request. Second-class postage paid at Urbana, Illinois.

Statistical Summary of Business Activity

Selected Indicators

Percentage changes, November 1976 to December 1976



[a] October 1976 to November 1976. [b] Seasonally adjusted. N.A. Not available.
* No change.

Illinois Business Indexes

Item	Dec. 1976 (1967 =100)	Percentage change from Nov. 1976	Percentage change from Dec. 1975
Employment — manufacturing[1]	85.7[a]	+ 0.0	+ 1.4
Weekly earnings — manufacturing[1]	197.7[a]	+ 1.9	+ 8.1
Consumer prices in Chicago[2]	169.1	+ 0.4	+ 4.8
Life insurance sales (ordinary)[3]	268.7	+22.5	+13.8
Retail sales[4]	216.4[b]	− 0.3	+13.3
Farm prices[5]	192.0	+ 7.9	− 4.5
Bank debits[6]	401.9[c]	− 0.5	+14.4
Building permits — residential[4]	57.4	−45.4	+11.3
Electric power[7]	n.a.		
Coal production[8]	93.3	− 0.6	+ 2.1
Petroleum production[9]	45.6	+ 3.3	+ 3.1

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Fed. Res. Bd.; [7] Fed. Power Comm.; [8] Ill. Dept. of Mines; [9] Ill. Geol. Survey.
[a] Preliminary. [b] Data for November 1976 compared with October 1976 and November 1975. [c] Seasonally adjusted. n.a. Not available.

United States Monthly Indexes

Item	Dec. 1976	Percentage change from Nov. 1976	Percentage change from Dec. 1975
	Annual rate in billion $		
Personal income[1]	1,440 7[a]	+13.6	+10.1
Manufacturing[1]			
Sales	1,250 3[a, b]	+ 3.6	+12.6
Inventories	167.2[a, b, c]	+ 0.0	+ 7.4
New construction activity[1]			
Private residential	60.6	−12.5	+31.3
Private nonresidential	50 8	− 6.1	+ 7.0
Total public	30 8	−14.4	−14 8
Foreign trade[1]			
Merchandise exports	127.3	+11.3	+15.1
Merchandise imports	137.4	+ 3.5	+28.9
Excess of imports	10 1	−45.0	...
Instalment credit[2]			
Extended	200.4[a]	+ 6.0	+ 9 7
Liquidated	178.5[a]	+ 2.5	+ 8.3
Business loans[2]	129.0[c]	+ 1 8	+ 0.8
Cash farm income[3]	102.0	−13.3	+ 5.7
	Indexes (1967 =100)		
Industrial production[2]			
Combined index	133[a]	+ 0 7	+ 6 8
Durable manufactures	124[a]	+ 0 4	+ 8.7
Nondurable manufactures	144[a]	+ 0 6	+ 5.3
Minerals	117[a]	0 0	+ 3.5
Manufacturing employment[4]			
Production workers	96	+ 0 2	+ 3.1
Factory worker earnings[4]			
Average hours worked	100	+ 1.0	− 0.3
Average hourly earnings	191	+ 1.3	+ 8.2
Average weekly earnings	192	+ 2.3	+ 7.9
Building permits — residential[1]	104	− 8.8	+42.5
Retail sales[1]	215[d]	+ 0.6	+11 4
Consumer price index[4]	174	+ 0 3	+ 4 8
Wholesale prices[4]			
All commodities	187	+ 0 8	+ 4.7
Farm products	192	+ 4.4	− 1.1
Processed foods and feeds	179	+ 2.4	− 1.1
Industrial commodities	187	+ 0.2	+ 6.4
Farm prices[3]			
Received by farmers	179	+ 3 5	− 3.8
Paid by farmers	195	+ 1.0	+ 6 0
Parity ratio	68[e]	+ 3.0	− 8.1

[1] US Dept. of Commerce; [2] Federal Reserve Board; [3] US Dept. of Agriculture; [4] US Bureau of Labor Statistics.
[a] Seasonally adjusted. [b] Revised series. [c] End of month. [d] Data for November 1976 compared with October 1976 and November 1975. [e] Based on official indexes, 1910–14 = 100.

United States Weekly Business Statistics

Item		1976 Jan. 22	1976 Jan. 15	1976 Jan. 8	1976 Jan. 1	1975 Dec. 25	1975 Jan. 24
Production:							
Bituminous coal	thous. short tons	7,805	9,810	11,250	9,690	10,500	11,905
Electric power by utilities	mil. kwh.	45,639	45,459	43,927	40,379	40,978	40,803
Passenger cars	number in thous.	162	178	179	8	157	177
Petroleum (daily avg.)	thous. bbl.	8,028	8,028	8,028	8,090	8,090	8,097
Steel, raw	thous. short tons	1,973	2,105	2,121	2,051	2,000	2,253
Rail freight, revenue ton-miles	bil.	13.1	13.6	13.8	12.4	12 1	14.9
Retail sales	mil. dol.	11,331	11,148	11,463	12,079	15,817	10,370
Prices:							
Wholesale, 22 commodities	1967 = 100	208 2	206.1	203.2	201 9	200 8	191 4
400 industrial stocks (Standard & Poor's)	1941–43 = 10	115 15	114.83	116 31	118.27	116 39	110 02
Finance:							
Bond yields, domestic corporate (Moody's)	percent	8 43	8.39	8.37	8.40	8 44	9 31
Business loans	mil. dol.	115,166	115,437	116,896	117,318	116,544	118,849
Failures, industrial and commercial	number	147	205	122	137	103	218

Source: *Survey of Current Business, Weekly Supplement.*

Publications and developments of business interest

Business Briefs

Shifts in Instalment Debt Holdings

THE Seventh District Federal Reserve Bank points out that over the past decade commercial banks have continued to hold the largest share of consumers' instalment debt (see chart). However, the greatest growth has occurred among credit unions. Whereas the bank share has grown by one-seventh since 1967, the credit unions have upped their share by more than half. Commercial banks have been foremost in lending money to finance car purchases and hold almost three-fifths of such debt outstanding. Auto loans, in turn, account for about 40 percent of bank-held instalment debt. Credit unions hold about 19 percent of car loans; finance companies hold the remainder.

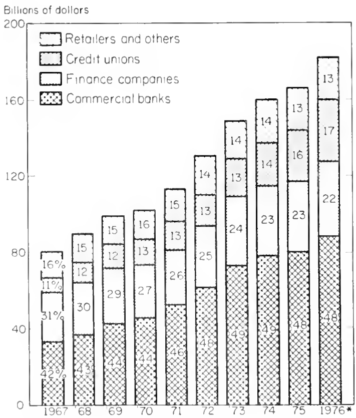
Finance companies' share of instalment credit has dropped by nearly a third since 1967. In their peak period in the 1950s they held 41 percent of instalment debt, about a tenth more than the banks held. Much of the drop reflects a shift from automobile credit to other activities such as financing accounts receivable for business firms.

State Revenues, Fiscal 1976

TAX RECEIPTS of state governments in fiscal 1976 rose to $89.3 billion, up 11.3 percent from the $80.2 billion collected in fiscal 1975. Sales and gross receipts taxes accounted for 53.1 percent of state tax revenue — general sales and gross receipts totaled $27.3 billion, and selective sales and gross receipts taxes amounted to $20.1 billion. The second largest source of revenue, state individual income taxes, yielded $21.5 billion, 14 percent more than in 1975. Such taxes are now collected in 44 states. Corporate net income taxes were up 9.3 percent from the previous year to $7.3 billion. State motor fuel tax revenue increased 4.9 percent in fiscal 1976.

Eight states accounted for over one-half of state revenue collected. The top five were California, $10.8 billion; New York, $9.8 billion; Pennsylvania, $5.1 billion; Illinois, $4.8 billion; and Texas, $4.2 billion. Tax revenues were up in every state, with all but two showing gains of at least 5 percent. In the previous fiscal year two states showed decreased collections and 12 states showed rises of less than 5 percent.

Holders of Instalment Debt



Source: Board of Governors of the Federal Reserve System.

Productivity and Labor Costs

PRODUCTIVITY in the nation's private nonfarm sector dropped during the fourth quarter of 1976, with output per man-hour declining at an annual rate of 0.1 percent compared with an increase at a 2.7 percent annual rate in the third quarter. The last quarter in which a decline in productivity occurred was the fourth quarter of 1975, when it fell at a 1.8 percent annual rate. In manufacturing, productivity declined in the fourth quarter at an annual rate of 0.5 percent compared with the third quarter's 5.7 percent annual rate of increase. The most recent previous decline in manufacturing productivity was in 1975's first quarter, when it fell at a 12.2 percent annual rate.

Compensation per man-hour in the private sector rose in the fourth quarter at an 8.9 percent annual rate, up from the third quarter's 7.6 percent rate. Reflecting the changes in compensation and productivity, nonfarm unit labor costs rose at a 7.7 percent rate in the last quarter compared with a rise of only 4.3 percent in the third quarter. In manufacturing, compensation per man-hour increased at a 7.7 percent annual rate; unit labor costs rose at an annual rate of 8.3 percent, up from an annual rate of 0.4 percent in the third period.

Preliminary Farm Census for 1974

THE Bureau of the Census has recently published a series of five preliminary reports titled "1974 Census of Agriculture: Northeast, North Central, South, West, and United States." The number of farms totaled about 2.5 million in 1974 and covered 438 million acres of cropland. At the time of the last previous census in 1969, there were 2.7 million farms with a total cropland of 459 million acres. Other information is presented on crop value, types of crops harvested, and farm sales and ownership.

Copies of the series can be obtained from the Subscriber Services Section, US Bureau of the Census, Washington, DC 20233. The price is 25 cents a copy.

Know your State: Illinois industries and resources

Natural Gas — Critical Energy Input

THE first recorded use of natural gas in the United States was in 1821 in Fredonia, New York. A shallow well was dug and the gas was piped to a nearby inn where it was used for illumination. Often found along with oil, natural gas was little more than an annoying by-product that was flared off — that is, burned off — as it rushed from the well.

Natural gas, an environmentally clean fuel, represents one of the nation's dominant sources of energy; it accounts for about 25 percent of total energy input to the US economy. Natural gas contributes over 40 percent of all energy utilized in the residential and commercial sectors and 45 percent of that in the industrial sector. In addition, gas provides about 15 percent of the primary energy inputs for the generation of electric power. Utility sales to 44 million ultimate customers totaled 164 billion therms of natural gas in 1973 and accounted for $13 billion in revenues.

The industry is divided into three segments: production, transmission, and distribution. Nearly 75 percent of US production originates in Texas and Louisiana. Gas is delivered through 1 million miles of pipeline to more than 44 million customers in the 48 continental states and the District of Columbia by 106 regulated interstate pipeline companies and more than 1,500 distribution companies.

Illinois — A Primary Consumer

Illinois production accounts for only one-hundredth of 1 percent of the national total. The State is served primarily via nine interstate pipelines, most of which originate in the southern states. Among these are Natural Gas Pipeline of America, Midwestern Gas Transmission Company, Mississippi River Transmission Corporation, Texas Eastern Transmission Corporation, and Texas Gas Transmission Corporation. The entire gas distribution network for the State consists of nearly 50,000 miles of pipeline. Texas and California are the only states that exceed this figure.

Taken together, the state's 19 privately owned gas utilities placed Illinois third in the nation in total number of customers and volume of sales. In 1975 state utilities delivered 10 billion therms of gas to over 3 million ultimate consumers, which accounted for nearly $1.5 billion in revenues.

Northern Illinois Gas Company is the state's largest utility, with 1.3 million customers and $692 million in revenues in 1975. The Peoples Gas Light and Coke Company, serving most of the populous Chicago area, is the state's second largest utility, with gas revenues over $430 million. Illinois Power Company, serving much of downstate Illinois, distributes to over 355,000 customers and its gas revenues amount to more than $132 million annually. Together, these three utilities account for 85 percent of total Illinois utility sales of gas. Other large utilities include Central Illinois Light Company, Northshore Gas Company, and Central Illinois Public Service Company.

Industrial and commercial establishments in Illinois account for 55 percent of total therm sales to customers. Since industrial and commercial rates are considerably lower than those for residential consumers, industrial and commercial sales yielded only 48 percent of gas utility revenues in 1975. Average revenue per therm for residential customers was 30 percent higher than for the commercial and industrial class.

Gas Supply — Uncertain Future

The problem with gas is that there is not enough of it. Reserves are declining with respect to demand at a rate that already has placed critical restrictions on consumption. The price of natural gas for the interstate market is regulated at the wellhead by the Federal Power Commission and to the consumer by public utility commissions. Producers of natural gas seek "deregulation" of their prices, which they assert have been held artificially low and have not provided them with enough incentive to finance additional gas exploration. Consumers of gas allege that continued regulation, perhaps in a modified form, is necessary to protect the public from a structurally uncompetitive producing industry. Nevertheless, according to FPC estimates, natural gas deliveries by interstate pipeline companies during the 1976–77 season will fall 21 percent short of what they have agreed to supply.

As the demand for natural gas increases, underground storage and temporary supplementary supplies will continue to play an important part in meeting peak demands and in providing off-peak depositories for pipeline gas. Gas for storage purposes can be transported through pipelines during warm weather months to improve the pipeline load-factor and can be sold during periods of heavy demand in the winter. To meet the extreme in demand of the coldest days, distribution companies, in addition to taking their maximum contract demand from their pipeline supplier and taking whatever underground storage gas is available, operate peaking plants which use very high cost liquified petroleum gas (propane or butane). Illinois currently has 37 such storage facilities scattered throughout the State. The State also has three supplemental gas plants that produce liquified and synthetic natural gas. These facilities, together, assist in the more efficient delivery of gas to the consumer market.

The potentially massive gap between natural gas supplies and demand has triggered the search for new ways to produce synthetic natural gas. Currently in Illinois there are plans for coal gasification facilities in New Athens, Pinckneyville, and Pekin. Problems with existing technology, rising costs, and legal factors have delayed initial construction at all three sites.

What's new in Illinois communities

Local Illinois Developments

Increases in Farmland Values

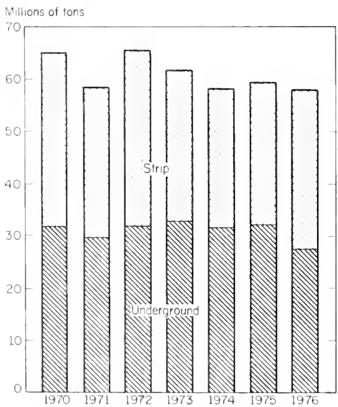
ON AVERAGE, the value of farmland in the five major Corn Belt states rose one-third last year. The 41 percent increase in Illinois raised the value of its farmland to an average of $1,497 per acre on 1 November 1976, compared with $1,184 a year earlier. Advances in other states in the Corn Belt included Ohio, 32 percent to $1,039; Indiana, 30 percent to $1,154; Iowa, 33 percent to $1,222; and Missouri, 20 percent to $472. Farm enlargement was the key factor in spiraling Corn Belt land prices; land scarcity, crop and livestock prices, investment in land as a hedge against inflation, and the availability of credit also contributed.

For the US as a whole, farmland values rose 17 percent last year compared with gains of 12 percent in 1975 and a record of 21 percent in 1974. Until land prices turned sharply upward in the early 1970s, the annual increase was 5 or 6 percent. The average value of US farmland last November was $445 an acre, up from $380 the year before and $339 in 1974. The 1976 average covered a range in land costs from a low of $76 an acre in New Mexico to a high of $2,852 in New Jersey.

Coal Production Down (Again)

IN 1976, Illinois coal production totaled 58 million tons, a decrease of 2.2 percent from 1975. The division of output between strip mining and underground mining has remained fairly constant at about 50 percent until last year, when the shares shifted to 47 percent for underground mining and 53 percent for strip mining (see chart).

Illinois Coal Production



Source: Illinois Department of Mines and Minerals.

The national picture shows coal production continuing to rise slowly. Total US output increased 3.4 percent in 1976. Bituminous coal production, which accounts for most of the tonnage, rose 3.5 percent during the past year.

O'Hare Extension Approved

CHICAGO has received federal approval for a rapid transit line to O'Hare International Airport. This $136 million project will extend the Milwaukee Avenue rapid transit line from Jefferson Park to the O'Hare taxiway bridge where it will enter a subway for the final link to a station beneath the main parking garage. Other stations are planned at Harlem Avenue and Cumberland and River roads. Construction will take approximately two years. The federal government is expected to provide about $109 million for the extension project, the Illinois Department of Transportation $18 million, and the city of Chicago $9 million.

New Industry in Tuscola

LITTELFUSE, INCORPORATED, a manufacturer of fuses used in automobiles, has opened a new plant in Tuscola to assemble cylinder-shaped fuses. These will be returned to the parent company for packaging and distribution. When in full operation, the plant is expected to produce 600,000 fuses a day. Currently, it employs seven workers; 80 people are scheduled to be hired by summer, 1977. Tuscola was selected for the plant because of labor availability and transportation facilities.

Lasers Make Phone Calls

THE first commercial test of a telephone link using beams of laser light traveling through glass fibers will be made soon in downtown Chicago. The American Telephone and Telegraph Company plans an in-service test of a 1.5 mile light wave communications cable between an office building and two telephone exchange centers. In this test, expected to be completed next year, a single pair of fibers will be able to carry nearly 600 telephone conversations or a television signal. In addition, the cable will carry computer data and picturephone signals. A total of 24 fibers will be carried within the half-inch cable, which will take only a small fraction of the space required for the copper-wire cables having similar capacity.

Illinois Bell also took part in two other major technological steps for the Bell System last year. The first was the initial installation of an all-electronic switching center for routing calls into the Long Lines circuits. The second involved the first local service application of a high-capacity computer controller, originally designed for a long-distance system.

Comparative Economic Data for Selected Illinois Cities, December 1976

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Bank debits[4] (000,000)	Estimated work force unemployed[5] (percent)
ILLINOIS		$60,145[a]	3,388.2[a]	$44,071[a]	$2,163,059[a]	7.4[b]
Percentage change from	Nov. 1976	−31.4	+5.9	−2.2	+2.8	
	Dec. 1975	−40.6	n.a.	+13.3	+14.4	
NORTHERN ILLINOIS						
Chicago		$27,692	1,702.7	$33,400	$2,066,180[b]	7.3[b]
Percentage change from	Nov. 1976	−3.9	+7.8	−4.5	+2.7	
	Dec. 1975	−12.4	+4.0	+10.6	+14.3	
Aurora		$ 877	123.0	$ 515		
Percentage change from	Nov. 1976	−44.6	15.6	+14.2		
	Dec. 1975	−56.5	−4.1	+37.3		
Elgin		$ 505	83.5	$ 506		
Percentage change from	Nov. 1976	−74.5	+8.2	−12.6		
	Dec. 1975	−12.6	+13.5	+24.0		
Joliet		$ 525	383.9	$ 386		
Percentage change from	Nov. 1976	−60.1	+8.9	+10.9		
	Dec. 1975	−51.4	+11.4	+19.1		
Kankakee		$ 145	74.5[c]	$ 224	n.a.	n.a.
Percentage change from	Nov. 1976	−41.0	+7.4	+10.3		
	Dec. 1975	−46.8	+4.6	+4.7		
Rock Island-Moline		$ 1,625	119.7[d]	$ 1,075	$ 20,875[b]	5.3[b]
Percentage change from	Nov. 1976	−82.1	+12.9	+7.9	+7.1	
	Dec. 1975	−69.1	+7.9	+35.2	+25.9	
Rockford		$ 2,196	158.8	$ 1,062	$ 11,894[b]	7.4[b]
Percentage change from	Nov. 1976	−17.2	+9.6	+20.7	+3.2	
	Dec. 1975	+179.0	+12.9	+23.6	+28.0	
CENTRAL ILLINOIS						
Bloomington-Normal		$ 6,839	42.4	$ 761	$ 8,178[b]	4.8[b]
Percentage change from	Nov. 1976	+54.4	+16.8	−5.7	−0.6	
	Dec. 1975	+630.9	n.a.	+13.1	+11.7	
Champaign-Urbana		$ 1,563	50.6	$ 727	$ 6,696[b]	4.6[b]
Percentage change from	Nov. 1976	−60.7	+12.0	+17.5	−0.2	
	Dec. 1975	+54.6	n.a.	+31.5	+6.0	
Danville		$ 790	40.7	$ 471	$ 2,735	n.a.
Percentage change from	Nov. 1976	−59.5	+2.5	−1.1	+2.3	
	Dec. 1975	+109.5	n.a.	+34.6	+32.8	
Decatur		$ 991	105.5	$ 527	$ 8,107[b]	9.7[b]
Percentage change from	Nov. 1976	−80.4	−0.9	+18.7	+14.5	
	Dec. 1975	−65.3	n.a.	+40.5	+0.3	
Galesburg		$ 993	30.9[c]	$ 195	n.a.	n.a.
Percentage change from	Nov. 1976	−16.9	+9.2	+15.4		
	Dec. 1975	+207.8	n.a.	+26.6		
Peoria		$10,351	170.1	$ 1,363	$ 18,206[b]	6.2[b]
Percentage change from	Nov. 1976	+56.3	+0.5	−8.1	+9.5	
	Dec. 1975	+215.0	−1.3	+23.5	+16.6	
Quincy		$ 632	42.4	$ 256	$ 2,829	n.a.
Percentage change from	Nov. 1976	+67.5	+3.7	+19.6	−3.7	
	Dec. 1975	−97.7	+14.6	+24.3	+19.5	
Springfield		$ 3,096	119.3	$ 1,548	$ 17,359[b]	7.5[b]
Percentage change from	Nov. 1976	−81.4	+15.5	−2.7	+8.6	
	Dec. 1975	−87.4	+11.6	+18.2	+10.8	
SOUTHERN ILLINOIS						
East St. Louis		$ 208	25.8	$ 237	n.a.	7.7[e]
Percentage change from	Nov. 1976	+342.0	+2.8	+43.6		
	Dec. 1975	+246.4	−8.5	+20.3		
Alton		$ 23	57.7	$ 163	n.a.	
Percentage change from	Nov. 1976	−59.4	−18.6	+30.4		
	Dec. 1975	−88.9	+11.4	+19.0		
Belleville		$ 880	23.1	$ 347	n.a.	
Percentage change from	Nov. 1976	+19.0	+9.5	+43.4		
	Dec. 1975	+139.5	n.a.	+30.5		
Carbondale-Murphysboro		$ 245	33.6	$ 308	n.a.	n.a.
Percentage change from	Nov. 1976	−74.8	+4.4	+9.2		
	Dec. 1975	−74.1	+24.0	−24.5		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 31 December 1976. [4] Federal Reserve Board; seasonally adjusted. [5] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Madison and St. Clair counties. n.a. Not available.

Is the Central Business District Becoming an Anachronism?

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SUBURBAN SHOPPING CENTERS have enjoyed nearly a quarter century of continuous growth while efforts of municipalities and local merchants to revive "downtown" shopping have been largely unrewarding. Many investors and businessmen alike were about ready to "write off" the central business district as a marketing anachronism when the Arab oil embargo of 1973 reminded them of the features which made the central business district a profitable location for retail and service outlets in the first place: accessibility and convenience. They were accessible by automobile as well as by mass transit without the customer's having to spend as much time in travel as in shopping; and they were convenient to hotels, restaurants, banks, savings and loan offices, professional offices, theaters, and the headquarters of local government.

Although suburban shopping centers rival and often surpass central business districts in the variety and quality of merchandise offered, they are typically less accessible and less convenient. These offsetting disadvantages of suburban shopping centers were of little consequence until the specter of gasoline shortages produced a reassessment of how we use what remains of this dwindling source of energy.

Consumers' Viewpoint

Consumers, of course, are the final arbiters. They are the benefactors who collectively compare the advantages and disadvantages of "downtown" versus shopping centers as a place to shop. It is through their eyes that such conditions as variety, price, parking, traffic, crowding, and distance become meaningful motivational factors. Weighing the merits of "downtown" versus suburban centers and attempting to compare the future of one with that of the other is not merely a matter of considering shopping satisfaction. Which location ultimately prevails in the contest for the consumers' patronage will depend in large part on how seriously they view energy conservation and on what downtown merchants do to enhance and embellish the inherent advantages of their location.

The cost of gasoline is sure to rise as its supply and availability become more uncertain. Although supply seems to be plentiful now and the West Coast is even bracing for an oil glut, this picture could change drastically in a few years. As the prices of everything else the consumer buys continue to rise, will the cost of living reach such levels that consumers who patronize shopping centers begin to add transportation to the cost of purchasing there? This is a distinct possibility in view of the distance over which suburban shopping centers, particularly the large ones, draw their patrons. It is not unusual for a center of 800,000 to 1 million square feet to attract customers over an area of 50 to 75 miles radius. The likelihood of such centers being able to survive on business generated by customers living in their immediate vicinity is questionable. A corollary question is whether the advent of rationing would reveal that motorists placed a higher priority on the use of gasoline for activities other than shopping.

Investors' Concerns

At the present time, it is clear that investors have few doubts about the continued ability of shopping centers to draw shoppers to the suburbs. *Forbes* magazine estimates that real estate investors have committed $60 billion to the development of shopping centers in the US (1 June 1976, p. 35). The International Council of Shopping Centers (New York based trade association) reports that about 2,500 centers were either built or expanded here last year.

Shopping centers also have attracted some of the nation's largest and most prestigious lending institutions, that is, those generally credited with the technical expertise to assess future trends with considerable accuracy. Connecticut General Life Insurance Company has nearly $100 million in shopping center loans outstanding and owns all or part of nine large centers (US Securities and Exchange Commission, *10-K Reports,* 31 March 1976, pp. 5–9; *Forbes,* 1 June 1976, p. 35). Northwestern Mutual Life Insurance Company has a $30 million shopping center loan portfolio and direct equity totaling $250 million in a number of regional shopping centers (SEC *10-K Reports,* 31 March 1976, p. F-16; *Forbes,* 1 June 1976, p. 35).

There are also the new commingled real estate funds set up by insurance companies and banks which encourage investment in real estate by other institutions. This device has opened another substantial source of capital to shopping center developers: pension funds. Recent stock market behavior appears to have convinced pension fund managers that real estate loans are a prudent diversification. Since most of them have had little experience in real estate, they have turned increasingly to commingled funds. Prudential Insurance pioneered this kind of investing in 1971 with the Prudential Real Estate Investment Separate Account fund. Since that time at least a score of other insurance companies (and banks) have launched commingled funds (*Forbes,* 1 November 1975, p. 70). Such a stimulus to real estate investment has made it easier for shopping center developers to finance higher risk ventures.

Investor enthusiasm for shopping centers has also been supported by at least three other circumstances: the rising volume of retail sales, favorable leases, and the consumer appeal of suburban locations. The upward spurt in total retail sales, particularly since the fourth quarter of 1972, has encouraged shopping center development, because the largest single share of sales by all but automotive and building material retailers (36 percent) is accounted for by shopping centers (*Shopping Center World Trade Magazine,* various years). Consequently, the value of existing centers is appreciating.

The manner in which shopping center leases are customarily written is favorable to owners. Leases typically contain clauses stating that sales volume over a specified

amount must be shared with the developer (Leonard A. Jones, *Jones Legal Forms: Contractual Business and Conveyancing Forms*, 10th ed. (Indianapolis: Bobbs-Merrill. 1962), pp. 592–93). During inflationary periods, such as the present one, these "overage rents" can amount to substantial sums. (General Growth Properties, a real estate investment trust which has consistently kept most of its $224 million assets in shopping centers, reported overage rents in excess of $1 million for 1975 (SEC *10-K Reports*, 13 March 1976).) Moreover, many leases contain clauses which require tenants to absorb increases in such operating costs as utilities, insurance premiums, and property taxes. Owners are in effect participants in, rather than victims of, inflation.

Land and Development Costs

The relatively lower cost of suburban real estate makes possible the inducement of free parking (acres of it) and traffic patterns which permit easy entrance and exit from parking areas. The architectural freedom available when designing new structures, as opposed to adapting or remodeling existing ones, permits the erection of those which provide completely indoor shopping. The consumer appeal of these characteristics has been dramatic. With the possible exception of free parking, these are features which central business districts find it difficult to match. When the quality and variety of merchandise offered equals or surpasses that available in the central business district, the pulling power of the shopping center is irresistible.

Central business districts, by contrast, have generally been unable to attract large investors, at least those willing to put their trust in the viability of downtown retailing, the traditional mainstay of downtown business activity. The very qualities which have made shopping centers so appealing to retail shoppers have been missing in many central business districts. Because of the building concentration in downtown areas, parking there is not plentiful and where it does exist in something like ample dimensions most municipalities cannot justify permitting it to be free.

Downtown areas which were laid out a century ago, when urban concentration was limited to a relatively few cities, cannot readily be altered to permit easy traffic flow into, out of, or around them. The city of Champaign, Illinois, for example, was originally laid out in a northeast-to-southwest direction like the IC & G railroad tracks. This does not match the grid pattern which prevails elsewhere in the city where the plotting is of more recent date. As a result, the blocks in downtown Champaign not only are of odd shapes and sizes but many streets are not through routes. This has produced a confusing and inconvenient traffic pattern which virtually defies alteration.

Merchants in the downtown area also have been plagued with higher crime rates than those in suburban shopping centers, with out-of-town store owners who have little interest in downtown development, and with multiple owners of downtown real estate. Multiple owners can severely complicate the problem of land acquisition for any prospective developer. Then too, it has been difficult to maintain the enthusiasm of local merchants for downtown development. Proposals for revitalizing the central business district have tended to possess an on-again, off-again character which invariably taxes the interest span of many businessmen.

It is not unusual for the first consultant retained to conduct a feasibility study to be advised to "shoot high." More often than not, this results in a proposal which requires such a staggering investment as to render it utterly unrealistic. Discouragement weakens interest and further thought of downtown redevelopment is postponed. A few years later interest may be revived, another consultant retained, and another feasibility study undertaken. This one may or may not produce a plan that is any more financially realistic than the first. The inescapable fact remains that because of the dimensions of the task, almost any downtown redevelopment has to be done in phases. This still requires a long-term commitment which is almost certain to involve changing traffic patterns, which in turn will require the approval and cooperation of local government.

Depending on the degree of initiative local government has been willing to assume, the initial step in undertaking central business district redevelopment frequently has been the organization of a development corporation. This has usually been necessary for three reasons: (1) to raise money which could be used to acquire real estate, (2) to conduct as well as finance feasibility studies, and (3) to give direction and focus to the task of identifying and negotiating with prospective developers.

Owing to the natural interest of the public in its purpose, the activities of the development corporation must be guided with some discretion. Unless local government is kept apprised of the corporation's activity, or itself becomes an active participant in the authorization of studies and shares in their results, local councilmen are likely to look upon the activities of a private development corporation with some suspicion. Lack of public relations finesse on the part of development corporation management has been a frequent cause of delay and frustration in implementing the recommendations of feasibility studies. It is also true that lack of business acumen on the part of local government officials has led them to misread the motives of developers.

These drawbacks of the central business district when compared with the advantages of the suburban shopping center have induced many downtown merchants to relocate in shopping centers. Moreover, there has been little incentive for others to take their place. This limits the variety of merchandise available to downtown shoppers, which in turn limits the sales potential of the area —a strong deterrent to any retailer considering the central business district as a place to conduct his business.

The depressive effect is cumulative. For retailers, competition is not always a bad thing, particularly when it generates traffic, as it does when they cluster together. If there is easy access to this cluster and shopping can be done there with ease and comfort, customers will be drawn to it. This largely explains the faltering performance of downtown retailers whenever they have been obliged to compete with suburban shopping centers.

Outlook

What then does the future hold for central business districts? Should merchants who are still there relocate as quickly as possible in a suburban shopping center? Or is there some strategy of downtown revitalization which promises some measure of success? A more direct and positive answer could have been given to this question several years ago than is possible today.

First, it should be observed that not all shopping centers have been equally successful. The depressed economic conditions of the early 1970s were felt by all retailers regardless of location. However, available data appear to indicate that all of the large shopping centers were able to meet their costs with some room to spare. A *Chicago Tribune* survey revealed that all suburban shopping centers in the greater Chicago area registered sales gains between 1974 and 1975, a period fairly typical of the recent recession. In every instance but two, the increase in sales was comfortably greater than the increase in the consumer price index (see Table 1).

Smaller centers, particularly the so-called strip centers (those with stores strung out along a major thoroughfare), did little better than their downtown counterparts. There have even been a few shopping center failures, the most spectacular being the $40 million Staten Island Mall in New York City. Opened in 1974 with an area of 850,000 square feet and anchored by Sears and Macy's, the center soon fell victim to high rents and low occupancy. Average utility costs soared to over $3 a square foot, taxes to $5.12 a square foot, and construction costs to $80 a square foot. Not only did the mall's owners pay $75,000 an acre for the land, but the city of New York then assessed it for tax purposes at $230,000 an acre. Owners have not even been able to pay interest charges (*Forbes,* 1 June 1976, p. 36).

Second, suburban shopping center developers do not have a monopoly on ways to attract investors. If the downtown area can be altered to provide convenient and ample parking, if traffic flow can be rerouted to allow easy entrance and exit, and if it is architecturally feasible to enclose the area in a way which provides year-round comfort, downtown retailers probably would be well advised to "stay put" and map out a strategy to "sell" the opportunities in the area to large real estate investors. As a minimal step, downtown developers would have to be prepared to offer investors a climate in which business would be treated as an equal in a partnership with local government as well as land costs which can be justified in view of the inherent advantages of downtown location.

Table 1. Leading Suburban Chicago Shopping Centers

Center	Year opened	Square feet (millions)	Sales (millions) 1974	Sales (millions) 1975	Percent increase
Woodfield	1971	2.1	$210	$240	14.3
Oak Brook	1962	1.25	160	175	9.4
Ford City	1965	1.42	138	165	19.6
River Oaks	1966	1.25	130	143	10.0
Old Orchard	1965	1.20	130	139	6.9
Yorktown	1968	1.50	125	135	8.0
Evergreen Plaza	1952	1.25	110	115	4.5
Randhurst	1962	1.20	100	103	3.0
Lincoln Mall	1973	1.20	84	90	7.1
Golf Mill	1960	.90	80	85	6.3
Hawthorn	1973	1.30	70	75	7.1
Lakehurst	1971	1.20	65	71	9.2

Source: *Chicago Tribune.*

A Climate for Revitalization

Contrary to much popular opinion, investors and developers are not primarily looking for tax breaks and favored treatment. They are looking for fair and equitable treatment in an environment which will assure them a competitive rate of return on their capital without the assumption of unreasonable risks. A city is forever, at least in the minds of many mortals, and investors in downtown development must carefully appraise the central city in terms of its long-term prospects as a trading area. The prospects for a relationship of cooperation and mutual understanding with local government are a key factor in such an appraisal. The nature of local codes, the reasonableness of their enforcement, the adequacy and efficiency of police and fire protection, and the availability of other services are all sensitive elements in the local business climate.

A climate which fosters government-business cooperation will also contribute to the type of organization among downtown merchants which permits consistent action. Such action as uniform store hours, uniform housekeeping standards, cooperative promotions, and a reasonable similarity in selling policies can do much to create a favorable image of downtown retailing in the minds of shoppers. There is at least a semblance of agreement among retailers, as well as among a number of those who advise them, that the most successful shopping centers, whether they are downtown or in suburbia, present a consistent image to the public. Whether it is an image of quality and service or of discount house bargains, the stores in the complex should offer merchandise, service, and prices consistent with this image. The more confusing the image of downtown retailing in the minds of consumers, the more its attraction for them is likely to be compromised. It is perhaps needless to comment that the image projected should be the result of investigation designed to determine what kind of image would possess the strongest appeal in those areas from which retailers expect to draw most of their customers.

Almost without exception the costliest land in a city is that situated in its central business district. The question is, How can the cost of such land, which has to be cleared of existing structures before new facilities can be built, ever be justified in comparison with the much lower cost of that on a city's outskirts? There is at least one possibility: closing downtown streets and including their acreage in the parcel of land to be developed. Since streets cost the city nothing — that is, what acquisition costs may have been incurred have long since been recovered — adding their acreage to downtown retail development would represent no cost to a city. In fact, if adjacent parcels of land to be incorporated into a development project are separated by streets, the closing of these streets and their incorporation into the project

would probably enhance its convenience to shoppers. Averaging the cost of cleared land over the additional acreage provided by closed streets could well bring the per-acre cost of downtown land to a level which makes it economically attractive when total costs are considered.

Net land cost in the central city does not have to be equivalent to that in outlying areas to attract developers, merely close enough that downtown's inherent advantages become pivotal considerations. For example, utilities and public services (police and fire protection) are already "in place" downtown; they do not have to be extended there as in the case of outlying locations. People — a core of shoppers — are already there and accustomed to going there to patronize theaters, hotels, and restaurants, transact business at professional and governmental offices, and avail themselves of the numerous services offered in the typical central city business district. They do not have to be drawn there by gala openings and lavish promotions.

By virtue of being the hub around which the city has developed, the central business district has an inherent drawing power unmatched by any suburban location. Geographically, downtown is an optimal location. It is interesting to observe that in four of the six Illinois cities for which central city retail sales data are available, sales increased from 1972 to 1974 (see Table 2). The sales/population ratios for these cities indicate that those families which did not leave the central city continued to shop there (Table 3).

Unfortunately, the key to capitalizing on this staying power to rebuild a flourishing retail trade downtown is enlightened local government — a political rather than an economic challenge. The challenge is all the more formidable because examples of politically adept business leaders are difficult to find. Equally difficult to find are examples of local political leaders willing to risk their popularity in laying the foundations of long-term economic growth whose benefits are not readily apparent. However, one subject all can perceive without much instruction is taxes. Perhaps that is the most compelling argument for the revitalization of downtown.

In those cities which are losing to other cities retail trade that used to be transacted "at home," recouping the viability of downtown retailing is an urgent matter. But it cannot be done without close business-government cooperation which produces a climate conducive to substantial long-term investment in downtown retailing.

Table 2. Central City Retail Sales Performance, 1972 and 1974

Central city	Total retail sales (millions of dollars) 1972	1974	Percent change
Champaign.	194.2	213.5	10
Chicago. . .	7,301.3	8,637.5	18
Peoria	534.9	494.2	−8
Rock Island	106.4	115.7	9
Rockford . .	447.3	537.6	20
Springfield.	398.9	355.5	−11

Source: Marketing Economics Institute, *Marketing Economics Guide, 1973–74*, Sec. 2, pp. 31–34, and *1975–76*, Sec. 2, pp. 31–34.

Table 3. Central City Population Change and Sales/Population Ratios, 1972 and 1974

Central city	Population change 1970–75 (percent)	Sales/population ratio 1972	1974	Percent change in sales/population ratio
Champaign	−1.6	3,455	3,839	11
Chicago	5.8	2,207	2,722	23
Peoria	7	2,720	3,864	42
Rock Island	−4.7	1,869	2,347	26
Rockford	−3.5	3,079	3,780	23
Springfield.	1.0	4,252	3,835	−10

Source: Marketing Economics Institute, *Marketing Economics Guide*.

Downtown is not simply a shopping and service area, it is a tax base for an entire city. It is not unusual for the central business district to account for as much as 15 to 20 percent of a municipality's total tax revenue. Moreover, if that tax base deteriorates, the entire city will have to pay for the decay either with increased taxes or curtailed services.

The effect of central business district decay is not limited to economic considerations. As the hub around which a city has developed, the downtown area provides the whole community with an identity. The more drab, run-down, and economically crippled it is, the more deleterious its psychological effect. Although the economic impact of such influences on a community virtually defy accurate measurement, they are none the less real, as any merchandiser, large or small, can testify.

Reestablishing the preeminence of downtown as a retail trading center is not the only way to revitalize it. Another option is to develop the central business district as a convenience center. Such centers feature a cluster of specialty shops offering a wide assortment of merchandise to appeal to a variety of tastes and needs. Gift shops, stationery stores, office supply dealers, jewelry stores, pharmacies, variety stores, and yarn shops all complement the services offered by banks, savings and loan associations, restaurants, and professional offices.

Typically, financial and professional offices are already in the downtown area and unlikely to be drawn to a suburban location. If indeed these offices are well established in the central business district, they can serve as the anchor for specialty retailers — a function normally filled by a well-known department store. The loss of such a store to a suburban shopping center, or the inability to attract one because of a shopping center, is not necessarily fatal to plans for downtown redevelopment. The drawing power of governmental agencies, good restaurants, theaters, and financial and professional offices can be just as pervasive.

Another option is to develop downtown simply as a center for professional offices. Accountants, lawyers, architects, and physicians can be attracted there with sufficient parking, good restaurants, and the construction of apartments and condominiums adjacent to the downtown area. This will require the encouragement of investment but not in the amounts needed to rebuild downtown as a retail trading center.

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Current Economic Developments

Economic activity has rebounded sharply from the effects of the winter storms. Output and employment have expanded. Consumer and business spending have moved up. At the same time, the rate of inflation has quickened. Reflecting the improvement in business activity, credit markets appear to have tightened, as business borrowing has expanded and interest rates have stabilized.

Government economic policy has not yet made a discernible shift since the inauguration of the Carter Administration. Monetary aggregates continue to rise at a moderate and reasonably steady pace — as they have over the past two years. Fiscal developments have not been expansive in recent months, but are expected to be more stimulative in the near-term future.

Output Expands

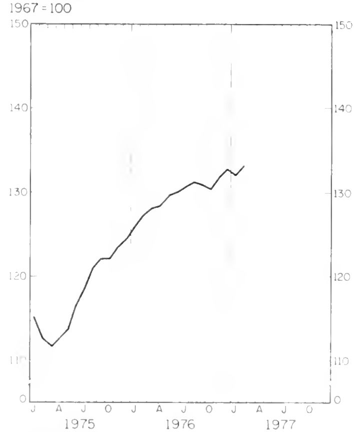
The nation's output has risen sharply since January, more than offsetting earlier weather-induced declines. Industrial production, which fell abruptly in January because of severe winter storms, has since risen at a 12 percent annual rate. The output expansion in February was achieved notwithstanding crippling weather conditions early in the month, and despite a dip in auto production. Recent output increases have occurred against a backdrop of generally slower gains in production. Since last August, industrial output has risen at a 2.9 percent rate, substantially slower than the 8.5 percent rise in the preceding year (see chart).

Home-building has also rebounded from weather-related declines. Housing starts rose to an annual rate of 1.8 million units in February, nearly regaining the December pace. Home construction has risen about 20 percent above its year-earlier rate, but remains well below prerecession levels. Funds are readily available to finance residential and commercial construction as interest costs for mortgages have backed off.

Labor Market Improves

Conditions in the labor market have improved since last fall. Employment has expanded at a 4.2 percent rate since October. In contrast, the number with jobs was virtually unchanged on balance during the preceding half year. Reflecting shifts in employment growth, un-

Industrial Production



Source: Federal Reserve Board.

employment rose during the summer and autumn of 1976, and has since declined. The unemployment rate, at 7.5 percent in mid-February, is down substantially from the 8 percent level reached last November.

Recent labor market gains have occurred despite a longer-term moderation in employment growth. Since last August, total employment has expanded at a 2.6 percent annual rate; in the preceding year, the number at work rose 3.2 percent. These employment developments have run parallel to underlying changes in production. Moreover, recent labor market inprovements fly in the face of demographic forces serving to push unemployment higher. There has been a marked and sustained increase in the proportion of the working-age population seeking job opportunities. Job growth over the past decade has been generally unable to keep pace with labor force growth.

Spending Increases

Consumer spending has continued to surge forward, reflecting increases in employment and income. Retail sales jumped upward at more than a 20 percent annual rate in February, nearly regaining their bloated December level. In early March, automobile sales registered a 19 percent gain over the corresponding year-ago pace, and were up sharply from February's rate. Although retail spending fluctuates erratically on a month-to-month basis (see chart), sales rose 9.4 percent during the year. However, nearly two-thirds of the year-to-year gain resulted from inflation, with physical sales rising only about 3.4 percent.

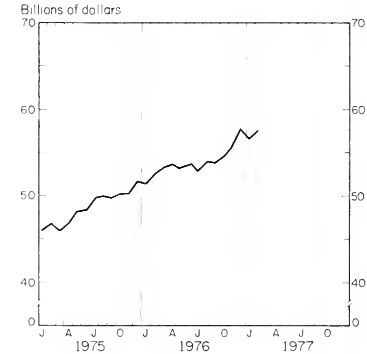
Business spending has also moved upward. New orders from manufacturers have strengthened to such an extent that shortages have begun to surface. Purchasing agents report short supplies in a variety of materials and commodities — including fuel oil, natural gas, bearings, selected castings, and large electric motors.

Aside from spending generally associated with current output, businesses have accelerated their plans for capital expenditures. The most recent Commerce Department survey of business capital spending plans for this year project an 11.7 percent increase, compared with a 6.8 percent rise in 1976. Moreover, government economists expect these projections to be revised upward. Reinforcing the view that business investment expenditures are likely to expand in the near future, a recent Conference Board survey reported a marked rise in capital *appropriations,* as distinct from *projections.* Capital appropriations are authorizations for future spending. In the capital expenditure process, appropriations precede the placement of orders for new capital equipment.

Inflation Quickens

The rate of inflation has accelerated to a "double-digit" pace in recent months. Consumer prices have exploded at an 11 percent rate so far this year. By comparison, during 1976 consumer prices rose less than 5 percent. Wholesale prices, which rose 4.6 percent in 1976, have since risen at an 8.3 percent rate. The intensification of wholesale price pressures has centered in food prices, as industrial prices have continued to move up at a 6.4 percent rate, the same as in 1976.

Retail Sales



Source: US Department of Commerce.

It is believed the recent inflation stems chiefly from temporary supply constraints, rather than from persistent aggregate demand pressures. The supply problems appear to be traceable to the unusually cold and stormy winter, drought, and other "acts of God." Even so, the price increases are now embedded in our price structure, and some time will be required before a full adjustment has been made.

Credit Markets Tighten

Credit markets are just beginning to show some of the characteristics that typically emerge during a business expansion. Bank loans have risen at about a 10 percent annual rate since last fall. However, much of the loan expansion has resulted from bank acquisitions of commercial paper and bankers' acceptances rather than from

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commercial lending. Interest rates have moved moderately upward since December (see chart). It is likely that the recent acceleration in inflation will augment upward interest rate pressures.

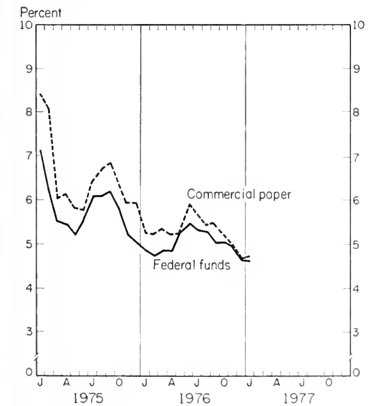
Even though the current economic expansion is nearly two years old, credit markets — and financial markets generally — have retained many of the characteristics of a recession. While bank loans and interest rates have risen somewhat in recent months, the upward trend is not yet firmly established.

Monetary Policy Unchanged

Monetary aggregates have continued to expand at a reasonably moderate pace. The monetary base — consisting of bank reserves plus currency — is viewed by some analysts as an important policy variable of the Federal Reserve System. Its growth is a chief prerequisite for an expansion in the money supply. The monetary base rose about 7 percent over the past year, not markedly different from rates of increase over the past several years. Moreover, the growth in the base has been fairly stable, not occurring in fits and starts.

The money supply rose about 6 percent last year. Reflecting stability in growth of bank reserves, the money supply also grew steadily throughout the year (see chart). Monetary policy actions during the recovery cannot be regarded as stimulative, as money supply growth has not even kept pace with inflation rates. Even so, there is a view among economists — probably a minority view — that a moderate growth in the supply of money has been appropriate.

Interest Rates

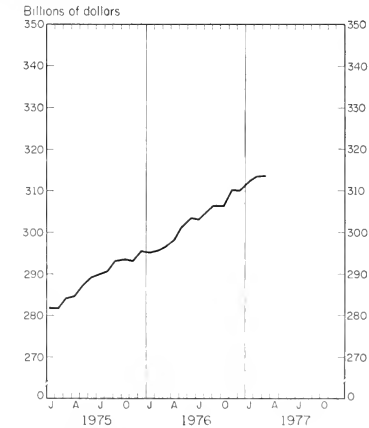


Source: Federal Reserve Board.

Fiscal Policy Easing

Fiscal policy has not been strongly expansive thus far in the business recovery. While burgeoning federal deficits have created the impression that fiscal policy has been stimulative, the deficits chiefly reflect a shortfall in tax receipts — not new spending initiatives. In fact, the rate of increase in federal expenditures has been cut in half over the past year. Meanwhile, tax reductions have not yet moved through the US Congress. However, in coming months fiscal actions are likely to turn increasingly stimulative. The Carter Administration has proposed an economic package involving both spending increases and modest tax cuts. It is estimated that the stimulus program would add $22 billion to $33 billion to the budget deficit.

Money Supply



Source: Federal Reserve Board.

As might be expected, there is considerable wrangling over specific proposals in the Carter package. The Administration has proposed tax credits for businessmen who make capital expenditures, a stimulative device used with varying degrees of success since the Kennedy years. Some economists have voiced concern over measures that reduce the cost of capital relative to labor and cause businessmen to accelerate further the introduction of laborsaving technology. It is argued that while such a strategy may stimulate aggregate demand, it is inappropriate in a period when the labor force is expanding rapidly — as has been the case over the past decade. Accordingly, Congress appears to favor a plan that would offer tax incentives to businesses that hire additional workers.

WILLIAM R. BRYAN

Local Illinois Developments

IIDA Makes Business Loans

The Illinois Industrial Development Authority (IIDA) provides loans to people who want to start new businesses or expand existing facilities and have been unable to raise money through other sources. Loans have ranged in size from $20,000 to $125,000. Interest charges are based on the prime rate, with a minimum interest rate of 8 percent and a maximum rate of 10 percent. Besides loaning money directly to businesses, IIDA is interested in helping local development corporations to attract industry. In many cases when federal funds can be obtained with local matching funds, IIDA can supply the local money, thus allowing the completion of the transaction.

IIDA loans are available in areas throughout the State which are considered economically depressed because of high unemployment. There are 27 "eligible" areas in Illinois, with a heavy concentration in southern Illinois and the inner city areas of Chicago. Since its initial funding seven years ago for the purpose of creating jobs, the Illinois Industrial Development Authority estimates that it has generated 1,100 jobs directly and another 748 jobs indirectly. These jobs have resulted in wage payments of $20 million to workers and tax payments of $3 million to various governmental units.

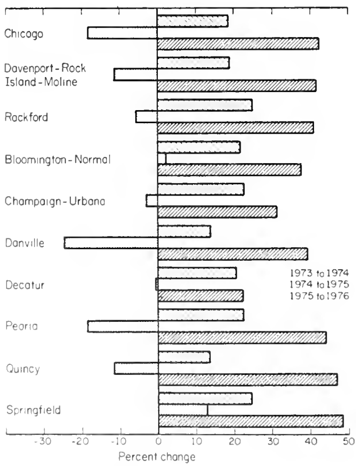
Persons wishing additional information may contact Mr. Leroy Brandon, IIDA, 2209 West Main Street, Marion, Illinois 62959.

Illinois Business Indexes

Item	Jan. 1977 (1967 =100)	Percentage change from Dec. 1976	Percentage change from Jan. 1976
Employment — manufacturing[1]	86.5[a]	− 0.5	+ 1.7
Weekly earnings — manufacturing[1]	197.7[a]	+ 2.4	+ 9.5
Consumer prices in Chicago[2]	169.5	+ 0.2	+ 5.6
Life insurance sales (ordinary)[3]	n.a.		
Retail sales[4]	247.5[b]	+13.8	+12.3
Farm prices[5]	197.0	− 2.5	+ 2.6
Bank debits[6]	411.4[c]	+ 2.3	+22.4
Building permits — residential[4]	18.4	−70.4	−44.6
Coal production[7]	67.9	−27.2	−25.3
Petroleum production[8]	44.6	0.0	− 0.8

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Fed. Res. Bd.; [7] Ill. Dept. of Mines; [8] Ill. Geol. Survey.
[a] Preliminary. [b] Data for December 1976 compared with November 1976 and December 1975. [c] Seasonally adjusted. n.a. Not available.

Changes in Bank Debits, Selected Cities
(Seasonally adjusted)



Source: Federal Reserve Board.

Bank Debits Increase

Bank debits, a measure of spending, showed healthy gains in all Illinois metropolitan areas during 1976. The rise in debits reflected a general increase in business activity. Six of the 10 Illinois cities reporting — Chicago, Davenport-Rock Island-Moline, Rockford, Peoria, Quincy, and Springfield — registered increases greater than 40 percent (see chart). The remaining four cities, primarily in central Illinois, showed gains exceeding 20 percent for the past year.

By comparison, bank debits fell in 1975 as a whole. Even though debits rose moderately in the first nine months of 1975 (see *Illinois Business Review*, December 1975), these gains were more than offset by sharp declines late in the year.

Blast Furnaces and Steel Mills

Steel is basic to any industrialized economy, since it supplies the essential materials for nearly every industry — virtually everything manufactured either contains steel or is made with the aid of steel tools. The industry's principal markets, however, are the automotive industry, construction, machinery and industrial equipment, appliances, the oil and gas industry, shipbuilding, agriculture, the railroads, and mining. The interdependence of markets for steel makes the industry especially vulnerable to fluctuations in the national economy. Historically the industry has followed cyclical patterns but with greater volatility than the general economy in both the down and the up phases.

The blast furnace and basic steel industry includes those "establishments primarily engaged in manufacturing hot metal, pig iron, silvery pig iron, and ferroalloys from iron and steel scrap; converting pig iron, scrap iron, and steel scrap into steel; and in hot rolling iron and steel into basic shapes such as plates, sheets, strips, rods, bars, and tubing." In the US there are approximately 500 such establishments and they employ more than 570,000 workers. Basic steel-producing facilities are located in 38 of the 50 states, but there are some very heavy concentrations, mostly within a six-state area stretching from New York and Pennsylvania to Illinois.

Much concern has been expressed over the past decade regarding the financial condition of the steel companies. The industry has been plagued with a large number of important problems including skyrocketing material and energy costs, a high rate of mandatory capital investment for pollution abatement, rising labor costs, a slow growth in productivity, an increasing rate of foreign imports, a high degree of government intervention in output pricing, and a lackluster demand for steel — primarily a result of decreased demand for durable goods such as automobiles, tool machinery, and commercial construction.

The most controversial of these problems has been the effect of foreign competition. The American Iron and Steel Institute, a steel trade organization, has estimated that imported steel accounted for 14 percent of the apparent steel supply in this country in 1976. A very large percentage of this total is accounted for by Japan, the world's largest exporter. In some "specialty steel" categories, Japan has gained as much as 40 percent of the US market. Much to the dismay of free trade advocates, the cry for imposing protective tariffs and quotas has come from many quarters — especially labor represented by the United Steelworkers of America.

Illinois — Primary Producer

In 1976 Illinois accounted for 8.6 percent of total US production of raw steel and ranked fourth in state output, trailing only Pennsylvania, Ohio, and Indiana. Steel output and employment in Illinois have been quite sensitive to overall cyclical fluctuations in the economy. Production of raw steel in Illinois in 1976 was 15 percent over the recession-affected 1975 level but did not match the previous peak of 1973. The following tabulation shows recent production (in thousands of tons):

Year	United States	Illinois	Illinois as percentage of US
1971	120,443	10,897	9.1
1972	133,241	12,152	9.1
1973	150,799	13,428	8.9
1974	145,720	12,939	8.9
1975	116,642	9,552	8.2
1976	127,943	11,030	8.6

In 1973 the state's 37 establishments employed more than 40,000, of whom over 80 percent were production workers, and accounted for 7 percent of the total US industry employment. Total state employment for the industry has declined steadily over the past 10 years. Since 1956 total employment in the state's blast furnace and steel mill industry has declined by 10 percent while the number of establishments has increased by 23 percent.

The Chicago steel district, which includes Gary, Indiana, is the nation's second-largest steel center, exceeded only by Pittsburgh. The city's central location and accessibility to raw materials makes it an economically desirable shipping point for distribution both nationally and internationally.

The United States Steel Corporation, the nation's largest steel producer, is the state's largest steel manufacturer and its operations in Chicago employ more than 10,000.

The state's second-largest producing area is in Madison County, where plants in Alton and Granite City manufacture much of the steel needed for the St. Louis metropolitan area. The two operations are owned by Laclede Steel Company and National Steel Company. Other large steel companies operating in the State are the Republic Steel Company, Chicago; Northwestern Steel and Wire, Sterling; Interlake Steel Corporation, Chicago; and Keystone Steel and Wire, Peoria.

Any sizable shift in the distribution of steel production away from the mid-eastern US is not expected in the foreseeable future, since sizable capital investment in new facilities would be required. The proximity of Illinois to major supplies of coal and iron ore and the availability of inexpensive transportation have been the important factors in determining the present distribution of output. These factors will most likely remain important to the contribution of Illinois to total output of steel in the United States.

Comparative Economic Data for Selected Illinois Cities, January 1977

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Bank debits[4] (000,000)	Estimated work force unemployed[5] (percent)
ILLINOIS	$42,285[a]	3,567.0[a]	$39,983[a]	$2,213,676[a]	7.5[b]
Percentage change from Dec. 1976	−29.7	+5.3	−9.3	+2.3	
Percentage change from Jan. 1975	−25.1	n.a.	−5.2	+22.4	
NORTHERN ILLINOIS					
Chicago	$13,677	1,786.8	$30,239		
Percentage change from Dec. 1976	−50.6	+4.9	−9.5		
Percentage change from Jan. 1975	−36.8	+7.3	−5.3		
Aurora	$ 658	166.7	$ 441		
Percentage change from Dec. 1976	−25.0	+35.7	−14.4	$2,118,559[b]	7.4[b]
Percentage change from Jan. 1975	+9.9	+22.0	−8.9	+2.5	
Elgin	$ 1,078	92.1	$ 490	+22.5	
Percentage change from Dec. 1976	+13.7	+10.3	−3.2		
Percentage change from Jan. 1975	−0.4	+14.1	+5.8		
Joliet	$ 896	376.8	$ 282		
Percentage change from Dec. 1976	+70.6	−1.9	−13.0		
Percentage change from Jan. 1975	+61.9	+6.0	+17.5		
Kankakee	$ 185	75.6[c]	$ 185		n.a.
Percentage change from Dec. 1976	+27.6	+1.5	−17.4		
Percentage change from Jan. 1975	+76.3	+6.9	−12.3		
Rock Island-Moline	$ 3,049	117.0[d]	$ 1,249	$ 21,266[b]	6.0[b]
Percentage change from Dec. 1976	+87.7	−2.3	+16.2	+1.9	
Percentage change from Jan. 1975	+14.9	+9.8	+28.2	+39.7	
Rockford	$ 965	162.4	$ 857	$ 11,233[b]	7.9[b]
Percentage change from Dec. 1976	−56.0	+2.2	−19.3	−5.6	
Percentage change from Jan. 1975	−9.5	+8.9	−0.9	+25.1	
CENTRAL ILLINOIS					
Bloomington-Normal	$ 2,040	46.4	$ 800	$ 8,679	5.3[b]
Percentage change from Dec. 1976	−70.2	+9.4	+5.1	+6.0	
Percentage change from Jan. 1975	+138.5	n.a.	+1.9	+12.9	
Champaign-Urbana	$ 336	44.7	$ 633	$ 6,470[b]	5.1[b]
Percentage change from Dec. 1976	−78.0	−11.7	+13.0	−3.4	
Percentage change from Jan. 1975	−75.1	n.a.	−13.9	+7.7	
Danville	$ 108	32.0	$ 371	$ 2,569	n.a.
Percentage change from Dec. 1976	−86.3	+3.2	−21.2	−6.0	
Percentage change from Jan. 1975	−2.7	n.a.	−15.9	+2.6	
Decatur	$ 700	104.5	$ 405	$ 7,767[b]	9.8[b]
Percentage change from Dec. 1976	−29.3	−1.0	−23.2	−4.2	
Percentage change from Jan. 1975	−30.6	n.a.	−13.5	−1.3	
Galesburg	$ 8,300	31.0[c]	$ 155	n.a.	n.a.
Percentage change from Dec. 1976	+735.8	+0.3	−20.5		
Percentage change from Jan. 1975	+137.1	n.a.	−8.8		
Peoria	$ 1,723	184.5	$ 1,142	$ 18,667[b]	6.2[b]
Percentage change from Dec. 1976	−83.4	+8.5	−16.2	+2.5	
Percentage change from Jan. 1975	−90.4	+5.1	−12.7	+13.2	
Quincy	$ 190	44.4	$ 217	$ 3,117	n.a.
Percentage change from Dec. 1976	−70.0	+4.7	−15.2	+10.2	
Percentage change from Jan. 1975	−62.9	+4.0	−8.1	+22.1	
Springfield	$ 465	129.7	$ 1,734	$ 15,349[b]	7.0[b]
Percentage change from Dec. 1976	−85.0	+8.7	+12.0	−12.5	
Percentage change from Jan. 1975	−66.7	+13.6	−2.8	+15.1	
SOUTHERN ILLINOIS					
East St. Louis	$ 117	26.9	$ 179	n.a.	
Percentage change from Dec. 1976	−43.8	+4.3	−24.5		
Percentage change from Jan. 1975	−87.0	−3.9	−19.7		
Alton	$ 64	73.3	$ 119	n.a.	
Percentage change from Dec. 1976	+180.6	+27.0	−27.0		8.5[e]
Percentage change from Jan. 1975	+153.8	−2.4	−14.4		
Belleville	$ 104	25.9	$ 242	n.a.	
Percentage change from Dec. 1976	−88.3	+12.1	−30.3		
Percentage change from Jan. 1975	−33.3	n.a.	−12.0		
Carbondale-Murphysboro	$ 7,632	36.3	$ 243	n.a.	n.a.
Percentage change from Dec. 1976	+3,018.9	+8.0	−21.1		
Percentage change from Jan. 1975	+2,189.8	+13.5	−33.6		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 28 January 1977. [4] Federal Reserve Board; seasonally adjusted. [5] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Madison and St. Clair counties. n.a. Not available.

Comments on Three Aspects of Farm Taxation

C. ALLEN BOCK, *Associate Professor of Agriculture Law, UIUC*

The business of farming has been the object of numerous special tax provisions. Some of these special provisions stem from federal law; some relate to Illinois law; still others are embedded in the Illinois constitution. This article discusses three areas of special tax provisions for farm businesses: (1) special provisions relating to real and personal property taxes, (2) special Illinois sales tax treatment, and (3) special provisions in estate and gift tax treatment at the state and federal levels.

Real and Personal Property Taxation

The Illinois tax structure has been changed significantly in recent years. The chief trend has been to shift the tax burden from local to state government and from state to federal government, and in doing so, to shift the burden from the property tax to other sources of revenue. Even with increased state and federal spending, however, the demand for local property tax revenues continues to grow and farm property taxes remain high.

The property tax provides a large proportion of the financial support to local government in Illinois. An example of our heavy reliance on this tax is shown by a comparison of per-acre property taxes on farm real estate in Illinois and in other midwestern states for 1972 (US Department of Agriculture, *Farm Real Estate Taxes, 1974*):

National average	$2.63
ILLINOIS	7.83
Iowa	5.89
Michigan	6.53
Indiana	5.93
Wisconsin	5.59
Ohio	4.10
Missouri	1.98

Illinois local governments still rely heavily on the property tax (see chart). Without state aid or shared revenues, the property tax would have supplied 65.8 percent of the total revenue to local governments in 1974–75.

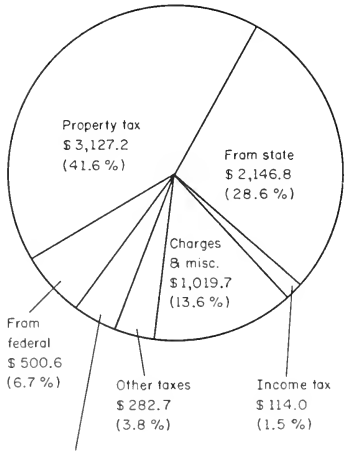
Illinois Constitutional Provisions. Article IX, Section 4(a) of the 1970 Illinois Constitution requires real property taxes to be levied "uniformly by valuation ascertained as the General Assembly shall provide by law." However, Section 4(b) permits counties with a population of 200,000 or more to classify real property for purposes of taxation, as limited by state law. Two important limitations affect farm real estate:

(1) The level of assessment or rate of tax of the highest class in a county cannot exceed two and one-half times the level of assessment or rate of tax of the lowest class in that county.

(2) Real property used in farming in a county cannot be assessed at a higher level than single-family residential real property in that county.

The agricultural lobby at the constitutional convention evidently thought that if a county classified real property it would probably put single-family residential real property in the lowest class.

Revenue Sources, Illinois Local Governments, 1974–75
(Dollars in millions)



Source: US Bureau of the Census, *Governmental Finances in 1974–75*, p. 46.

Special Valuation Relief for Farm Realty. The framework for valuation of property is provided by Section 501 and subsequent sections of Chapter 120 of the *1975 Illinois Revised Statutes.*

The valuation of property in 83 Illinois counties rests (in its initial phases) with local tax assessors elected

by townships. Eighteen counties not organized on a township basis and one county organized on a township basis have elected county assessors or a county board of assessors. Real estate is assessed every four years, between 1 January and 1 June, the assessors fixing value as of 1 January.

Considerable criticism of the property tax system by farmland owners has centered around the actual assessment process. Some of the criticism has been eliminated by improved training programs for assessors and by better assessment techniques based on soil productivity indexes developed by members of the Department of Agronomy at the University of Illinois. In the opinion of many property tax specialists, however, modernization of the assessment process has just started.

One special Illinois law provides possible relief for some farmland owners (*1975 Illinois Revised Statutes,* Chapter 120, Sec. 501(a)(1)–(3)). Most farmland owners can, upon application to the county supervisor of assessments, have their property valued at 33⅓ percent of the fair cash value the property would bring at a voluntary sale where the buyer would use the property for farming or agricultural purposes. The property would also be valued at 33⅓ percent of its fair cash value without reference to its agricultural use.

If the agricultural assessment is lower, the owner pays property taxes on that valuation. If the land ceases to be used for farming or agricultural purposes, the person liable for the taxes on the property must pay the difference (plus interest) between the taxes actually paid and the taxes that would have been levied if the property had been valued without reference to the agricultural use. This repayment requirement applies to the three years preceding the conversion of the land to a nonagricultural use.

Abolition of the Personal Property Tax. Article IX, Section 5(b) of the 1970 Illinois Constitution carried forward the amendment to the 1870 constitution abolishing personal property taxes on individuals. This amendment was later sustained by the United States Supreme Court. Therefore, farmers operating as sole proprietors no longer pay personal property tax on grain and livestock inventories, farm machinery, and so on. However, as a result of a definition by the Illinois Supreme Court, farm partnerships and corporations still must pay personal property tax on the personal property owned by those entities.

The 1970 constitution appears to provide some relief for corporations and partnerships. Article IX, Section 5(c) provides that "On or before January 1, 1979, the General Assembly by law shall abolish all ad valorem personal property taxes." However, Article IX continues by stating that

> Concurrently therewith and thereafter [the General Assembly] shall replace all revenue lost by units of local government and school districts as a result of the abolition . . . by imposing statewide taxes, other than ad valorem taxes on real estate, solely on those classes relieved of the burden of paying ad valorem personal property taxes because of the abolition of such taxes. . . .

One result of the imposition of the tax on farm partnerships and corporations is the trend toward the lease of farm machinery to these entities. Leasing provides a potential personal property tax saving of $3,000 in many counties if the machinery has a fair market value of $200,000, not an unusual amount for many Illinois farm operations.

Although the fact is not readily apparent, the constitutional provision is a "mandate" and not enforceable if the legislature chooses not to act (*Elk Grove Engineering Co.* v. *Korzen,* 55 Ill.2d 393, 304 N.E.2d 65 (1973)). Even if it does act, the farm partnerships and corporations must still be concerned about the kind and extent of the replacement taxes. This is of special concern to those farm partnerships and corporations presently paying no personal property tax because of the lack of ownership of any personal property. These same entities appear to be within the "class" relieved of paying such taxes, if they are abolished, and would be subject to the replacement taxes.

Illinois Sales Tax

The Illinois retailers occupation tax on the sale of tangible personal property at retail in Illinois does not generally apply to the farmer because his sales are not retail sales. Although a farmer might occasionally sell a quarter of beef or a part of a butchered hog at retail, most of these sales are exempt from the sales tax as a result of the provisions of Section 1 of the retailers occupation tax:

> The isolated or occasional sale of tangible personal property at retail by a person who does not hold himself out as being engaged (or who does not habitually engage) in selling such tangible personal property at retail does not constitute engaging in the business of selling such tangible personal property at retail. . . .

Many of the products sold to farmers are not subject to the sales tax.

Farm chemicals are exempt from the sales tax (Public Act 79-946). "Farm chemicals include any chemical product used in the production of crops that are to be sold or in the production or care of animals that are to be sold or the products of which are to be sold" (Bulletin, Department of Revenue, 1 October 1975).

Seeds sold to purchasers who use the seeds in raising grass, vegetables, crops, or other plants for sale are exempt from sales tax. Likewise, *fertilizers* sold to purchasers who regularly engage in the business of producing agricultural products for sale are exempt from the sales tax (Department of Revenue Rule 33).

Feeds sold to purchasers for feeding livestock or poultry for marketing or for producing dairy products or eggs for marketing are also exempt from sales tax (Rule 32).

Farmers or producers of *breeding livestock* are not liable for the sales tax on the money received from the sale of bulls, stallions, or other serving animals sold for breeding purposes (Rule 32).

Most of these products are not subject to the sales tax because they are considered to be sales for purposes of resale and not sales at retail where the products will be consumed.

Federal Estate and Gift Taxes

Inflation, rising prices, and improved technology in recent years have pushed values of farm property upward. US farm real estate values per acre in early 1975 averaged about 11 times higher than in 1940 and 3 times higher than in 1960. Since 1940, the average size of farms has more than doubled. Consequently many landowners find that the value of their farm property is greater than they had ever expected it would be.

Medium-sized farm properties that would have escaped estate taxes a few years ago are now of such value as to incur major estate tax payments. An average midwestern farm owner now may have accumulated an estate worth a quarter to half a million dollars. The large landowner may be worth several millions.

1976 Tax Reform Act. The new act, generally effective 1 January 1977, substantially changed the previous rules governing the taxes assessed on the transfer of property at death or during lifetime by gift. The effect on farm estates and the transfer of those farm estates to the next generation was also changed.

Prior to the new act a person could transfer up to $60,000 in property value on his death without incurring any federal estate tax. The $60,000 exemption had been in effect since 1942 and was replaced in the 1976 act by a tax credit which will reach $47,000 in 1981. Table 1 shows the impact of the federal estate tax on the transfer of farm estates of $275,000, $775,000, and $1,525,000 to the children (next generation).

The table assumes the husband dies first and leaves all his property to his wife. It also assumes that the wife has property of her own equal to the taxes, debts, and expenses of her husband's estate, and that the wife lives for at least 10 years after her husband's death. If the husband has planned his estate and restricted the kind of interest in property transferred to his wife, then the tax amounts would be different. Assume all deaths are 1981 or later when the tax credit has reached $47,000.

As the table indicates, careful and sophisticated planning is necessary to transfer the family farm to the next generation. Combinations of gifts, sales, trusts, and marital deduction planning are sometimes used in an attempt to substantially reduce the federal estate tax liability.

Two 1976 Tax Reform Act provisions may be of special significance to the farmer — the special valuation for farmland and the delayed payment of estate taxes.

Special Valuation of Farm Realty. Partly as a result of considerable pressure by farm interest groups, Congress included a section in the 1976 Tax Reform Act which permits a special valuation procedure for some farm real estate for estate tax purposes.

Essentially, the new section permits the executor of the estate to use a valuation technique other than an appraisal of the property at its fair market value.

Section 2032A(e)(7) of the Internal Revenue Code (IRC) provides that the value of a farm for farming purposes can be determined by the following formula:

> excess of average annual gross cash rental for comparable land used for farming over average annual state and local real estate taxes for such comparable land
>
> *divided by*
>
> the average annual effective interest rate for all new federal land bank loans.

(Average annual computations are based on the five most recent calendar years ending before the decedent's death.) A practical application of this formula in Champaign County would yield the following result: ($120 per acre rent minus $20 property taxes) ÷ (8%) = value of $1,250 per acre.

Without the benefit of this special provision, this same land probably would be valued for estate tax purposes at $2,500 to $3,000 per acre.

If for some reason this formula cannot be used, an alternative procedure is provided to permit qualifying farmland to be valued not at its fair market value but instead at its fair market value for farming purposes.

Limitations on the Use of the Special Valuation. In an attempt to limit the availability of such a formula to family farms, Congress included a number of qualifying limitations in IRC Section 2032A. They may be summarized as follows.

(1) On the date of decedent's death 50 percent or more of the adjusted value of the gross estate must be made up of farm real and personal property and it must pass to a qualified heir (generally a close family member).

(2) Same as (1) except that 25 percent or more must be farm real estate.

(3) During the eight-year period ending on the death

Table 1. Federal Estate Taxes, Three Examples

Item	Estate size					
	$275,000		$775,000		$1,525,000	
	Husband	Wife	Husband	Wife	Husband	Wife
Gross estate	$275,000	$275,000	$775,000	$775,000	$1,525,000	$1,525,000
Debts and expenses	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)
Adjusted gross estate	250,000	250,000	750,000	750,000	1,500,000	1,500,000
Marital deduction	(250,000)	(0)	(375,000)	(0)	(750,000)	(0)
Taxable estate	0	250,000	375,000	750,000	750,000	1,500,000
Tentative tax	0	70,800	113,300	248,300	248,300	555,800
Tax credit	...	(47,000)	(47,000)	(47,000)	(47,000)	(47,000)
Federal estate tax	0	23,800	66,300	201,300	201,300	508,800
Combined tax	$23,800		$267,600		$710,100	

of the decedent there must be periods aggregating five years or more during which

(a) the property was owned by the decedent or a member of his family, and

(b) there was "material participation" by the decedent or a member of his family in the operation of the farm.

(4) All heirs receiving an interest in the property which will be specially valued must agree to the procedure.

(5) The most the procedure can reduce the value of the qualified real property is $500,000. Note: If a farmer has a $1,000,000 estate prior to the special valuation and a $500,000 estate after, there would be a potential estate tax saving of $210,000.

(6) The saving in tax will have to be paid back to the United States government if within 15 years after the decedent's death and before the death of the qualified heir receiving the property

(a) the heir disposes of any interest in the property other than to a member of his family *or*

(b) the heir no longer uses the qualified property for farming purposes.

The tax is imposed on the heir described in (a) or (b).

(7) Under IRC Section 6324B, the United States will take a lien in the property for the amount of the reduction in taxes until the liability period as described in (6) terminates.

Although this procedure will substantially reduce the estate tax liability of many Illinois farmers, the procedure is very complex and administration by the Internal Revenue Service will be difficult. The attempt to exclude nonfarmers from qualifying was admirable and well considered, but it is the opinion of many estate tax planners that a nonfarmer could, with proper planning, qualify under this procedure and save substantial estate taxes. Congress may have unintentionally created an estate tax shelter for nonfarmers, thereby encouraging such individuals to purchase farmland. This may have undesirable agricultural policy implications.

Land owned by family farm corporations, partnerships, and trusts may or may not qualify for this special valuation. The Treasury is to issue specific regulations clarifying the matter.

Delayed Payment of Estate Taxes. The estate tax attributable to a farm or other closely held business can be paid over a 15-year period if the value of the closely held business (farm business) is at least 65 percent of the decedent's adjusted gross estate (IRC Section 6166).

If the estate qualifies, it can defer any payment of tax for up to five years and then pay the tax in equal instalments over the next 10 years. The deferred estate tax attributable to the first $1 million of farm business property is subject to an interest rate of only 4 percent.

Farm Corporations and Income Tax Savings

As taxable incomes of farmers increase, federal income tax considerations become more important. Many top Illinois commercial farmers had taxable incomes during the last three or four years of $40,000 or more. These farmers have typically reinvested $20,000 to $30,000 of that amount in the farm business, using the remainder for personal living expense. For these individuals, the farm corporation as a tax saver is an attractive type of business organization to consider.

A corporation is a separate taxpayer for most tax purposes and the recent interest in farm corporations can generally be attributed to a change in the federal corporate income tax rates. As of 1 January 1975, the tax rate on the first $25,000 of taxable income was 20 percent; the tax rate on the next $25,000 of taxable income was 22 percent. On income exceeding $50,000, the corporate tax rate is 48 percent. These rates are effective through 1977.

Assuming the corporation pays the former sole proprietor a salary (deductible to the corporation) of $20,000, Table 2 illustrates the potential annual income tax saving of the corporation at various taxable income levels.

Table 2. Tax Savings Possible Through Incorporation

Taxable income of business[a]	Sole proprietor, total tax	Corporate form, combined tax of individual ($20,000 salary) and corporation
$ 20,000	$ 4,380	$ 4,380
40,000	12,140	8,380
50,000	17,060	10,480
60,000	22,300	12,680
80,000	33,340	19,680
100,000	45,180	29,280
120,000	57,580	38,880

[a] Married taxpayers filing joint returns pay income tax at a rate of 22 percent after taxable income reaches $8,000.

The potential annual saving at the $50,000 taxable income level is $6,580. Although this magnitude of saving is very attractive, other corporate tax and nontax attributes discourage many farmers from incorporating the farm business.

Labor Report

The US Department of Commerce in conjunction with the US Department of Labor has recently published *Labor-Management Relations in State and Local Governments: 1975*. The study presents numerous data series including extent of employee organization, labor relations policies and types of written agreements binding parties, forms of bargaining units, and work stoppage information. Several of the series give information for state and local governments, some series report on municipal and township governments, and others summarize data for county governments and school districts.

Copies are available from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402. The price of the report (Series GSS No. 81) is $2.30.

The Personal Exemption: Deduction or Credit?

RICHARD FRYMAN, *Associate Professor of Economics, Southern Illinois University at Carbondale*

President Carter has recently recommended that the personal exemption under the federal personal income tax be converted from its present form as a deduction from adjusted gross income (AGI) to a tax credit. About a half dozen states presently use a tax credit for their income tax exemption, and some writers have long advocated the same for the federal tax.

A tax credit — being a deduction directly from taxes owed — reduces tax liability by the amount of the credit. The present exemption — a deduction from adjusted gross income — reduces taxable income before the rates are applied, and the tax saving differs depending upon the bracket in which the taxpayer falls. For example, a taxpayer in the 14 percent bracket finds that the $750 exemption reduces his taxes by $750 × .14 = $105. The same $750 exemption for a taxpayer in the 50 percent bracket reduces taxes by $750 × .50 = $375.

It is argued by some that it is unfair for high bracket taxpayers to save more from an exemption than taxpayers in lower brackets. A tax credit, it is noted, would reduce taxes by an equal amount per exemption for all taxpayers regardless of bracket.

Defenders of the present exemption argue that if it is fair for *increases* in taxable income to bring relatively large tax increases for high-bracket taxpayers, then it should be considered fair for *decreases* in taxable income from any source — exemptions, personal deductions, business expenses — to bring relatively large tax reductions. These relatively large tax savings from an exemption for high-bracket taxpayers, it may be argued, are simply "symmetrical" to large tax increases — both being brought by graduated rates — and should not be regarded as unfair.

Such debate is important, and since the issue is fairness, the arguments must be judged right or wrong depending upon one's opinion.

The purpose of this article is to facilitate the deduction versus credit debate concerning the personal exemption by attempting to clarify some of the issues. The paper will point out that Mr. Carter's suggestion, if adopted, would increase the degree of progressivity of the federal personal income tax, and that therefore two important issues in the debate are (1) Should the federal income tax be made more progressive? and (2) If so, is a change in the form of the exemption a proper method for achieving the goal?

Effects on Progressivity

The accompanying table illustrates the effect on single taxpayers A and B of converting the personal exemption from its present $750 deduction from AGI to Mr. Carter's suggested $240 tax credit. After deducting the $750 exemption from A's $5,000 AGI and B's $35,000, their respective taxes are computed to be 14.9 percent of AGI and 32.6 percent. (For simplicity personal deductions and tax credits are ignored.) Taxpayer A's exemption results in a tax saving of $750 times his marginal bracket or $750 × .21 = $157.50; B's tax saving from the exemption is $750 × .50 = $375.

Now suppose Mr. Carter's recommendation is adopted and the exemption is converted to a $240 tax credit. Taxpayer A's exemption now reduces his taxes by $240, up from the previous $157.50. B's exemption, however, now saves him less in taxes than before — $240 compared with $375. A's income tax now represents 13.2 percent of his AGI, down from 14.9 percent; B's tax has risen to 33.0 percent of his AGI, up from 32.6 percent. By reducing the tax on low-bracket taxpayers and raising it on high-bracket taxpayers, the conversion of the personal exemption from a $750 deduction from AGI to a $240 tax credit would increase the degree of progressivity of the tax. This of course would be true of any change which reduced taxes on low incomes and/or raised taxes on high incomes. Thus the degree of progression could also be increased, for example, by reducing or eliminating the present deduction exemption for high-bracket taxpayers.

Is Greater Progressivity Desirable?

Since conversion of the personal exemption to a flat sum tax credit would make the tax more progressive, the question arises, Should the federal income tax be more progressive? From the point of view of equity, there is no scientific answer to this question. It is a matter of opinion. It cannot be shown that to be fair a tax must be progressive or proportional or regressive. And it certainly cannot be proved that a particular level or degree

Example of Effect on Progressivity of Converting a Deduction to a Credit

Form of exemption	Single taxpayer A	Single taxpayer B
Deduction from AGI = $750		
AGI	$5,000	$35,000
Less $750 exemption	750	750
Taxable income[a]	4,250	34,250
Marginal bracket[b]	21%	50%
Tax	742.50	11,415
Tax as percent of AGI	14.9%	32.6%
Tax saving brought by exemption	157.50	375
Tax credit = $240		
AGI = taxable income[a]	$5,000	$35,000
Marginal bracket[b]	21%	50%
Tentative tax	900	11,790
Less $240 credit exemption	240	240
Tax	660	11,550
Tax as percent of AGI	13.2%	33.0%
Tax saving brought by exemption	240	240

[a] Assumes no personal deductions.
[b] 1975 rates of federal personal income tax.

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of progressiveness is necessary for fairness. It can be argued that a fair solution to questions of equity requires a knowledge of the collective opinion of the electorate.

There are other grounds besides equity for favoring or opposing increased progressivity for the federal income tax. These include effects on work incentives and the supply of labor, effects on investment and risk taking, and effects on the "built-in stability" feature of the income tax. My purpose is not to attempt to reach conclusions concerning these possible effects; it is to point out issues which might be considered in the debate. A careful consideration might or might not find these issues significant in the decision concerning the form of the exemption.

Pros and Cons of the Change in Form

Richard Goode, an eminent authority on the income tax, has pointed out that much of the present effective progression of the federal personal income tax is due to exemptions and the standard deduction rather than to graduated rates. It should also be noted that personal, exemption-like credits already exist under the federal income tax, having been introduced as a $30 per person credit in 1975 and increased to the larger of $35 or 2 percent of the first $9,000 of taxable income in 1976. Hence precedents exist both for using the exemption as one means of making the tax progressive and for using personal tax credits.

Some writers have even made a case for *all* progression under the income tax being brought by a credit. This would be accomplished by eliminating graduated rates, greatly broadening the base, and substituting a large flat sum tax credit for the present exemption. Even though flat rate, such a tax would be progressive, since the credit would exempt a larger portion of low incomes than of high incomes. It would also probably be simpler and avoid many distortions found in a steeply graduated tax.

Graduated rates also have the important disadvantage of sometimes treating differently taxpayers who apparently have equal incomes. For example, two taxpayers with equal incomes over, say, a two-year period would pay considerably different taxes if one earned all his income in one year while the other earned the same total evenly spread between the two years. Other "horizontal equity" problems caused partly or entirely by graduated rates include the treatment of married couples versus single individuals and the effects of inflation on taxes paid. If the rate schedule were changed to attempt to make the tax more progressive, these horizontal equity problems would probably become more pronounced. Making the tax more progressive by changing the form of the exemption apparently would result in less aggravation of these problems.

From a tax consciousness point of view, it might be argued that if the goal is to make an income tax more progressive, it should be done by changing the rate schedule, since this is probably the most understandable way of doing so. Making the tax more progressive by changing the form of the exemption might be considered a "backdoor" or hidden approach, which tends to obscure the true degree of progression of the rate schedule. On the other hand, it could be argued that changing the form of the exemption to a credit could serve to offset to a slight extent the present distortion of the rate schedule caused by the present exemptions and personal deductions.

There are, then, some arguments both for and against changing the form of the personal exemption as a means of increasing the progressivity of the personal income tax. It would appear, however, that the basic issue in practice is not the *means* of making the tax more progressive, but whether or not the *end* of greater progression is desirable.

If one feels that the tax should be more progressive, there appears to be no great argument against Mr. Carter's suggestion to change the present exemption to a tax credit. If one feels that the tax should not be more progressive, then Mr. Carter's plan is probably objectionable.

A monthly summary of business conditions for Illinois

Illinois Business Review

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Current Economic Developments

The economy has bolted upward since early this year. Real output rose rapidly in the first quarter despite the adverse effects of the winter storms. Reflecting the gains in output, employment has expanded and unemployment has edged lower. Household incomes have moved strongly upward and, as a result, consumer spending has jumped higher. Accelerating inflation is an unwanted symptom of the strengthening in the economy.

The marked improvement in business coupled with sharp price increases have muted the thrust of the Administration's economic policy. According to the budget program announced in February, fiscal policy will move toward less stimulation over the next 18 months. The focus of concern is shifting from unemployment toward inflation. Hence, it appears that increased weight may be given to the inflationary implications of future policy initiatives.

Growth in Real Output

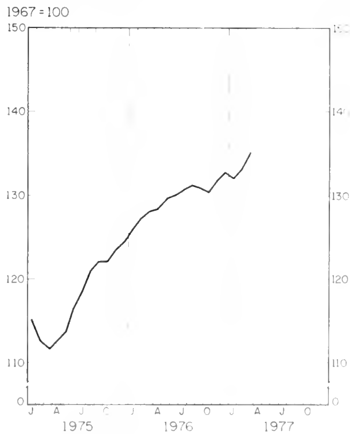
Real output spurted upward in the first quarter following a lackluster performance in the final quarter of last year. Real gross national product — that is, GNP adjusted for the effects of price changes — rose at a 5.2 percent annual rate in the quarter just ended. The first-quarter rise was double the pace achieved in the December quarter, and was the eighth consecutive quarter-to-quarter gain. A major factor accounting for the jump in the growth rate was a large increase in the rate of inventory accumulation. The pace of inventory growth rose $7.5 billion in the first quarter, compared with a $1.7 billion rise in the preceding quarter.

The impression of rapid real growth is confirmed by other measures of physical output. Industrial production rose at a 5.3 percent annual rate from the fourth quarter of 1976 to the first quarter of this year, despite a sharp dip in January (see chart). There is continued recovery in home building. Housing starts, which averaged just under 1.8 million units in last year's fourth quarter, appear to have moved higher — reaching a 2.1 million unit rate in March.

Expansion in Labor Market

Employment has risen strongly in 1977. Since January, the number with jobs has expanded at a 6.4 percent

Industrial Production



Source: Federal Reserve Board.

EFTS: Payments System Evolution *By Morgan J. Lynge, Jr.* / *Page 7*

New York City's Financial Crisis *By Roland W. Bartlett* / *Page 9*

annual rate (see chart). During 1976 employment rose 3.5 percent. Other measures of market conditions among those with jobs show either stability or improvement. The manufacturing workweek has lengthened, and overtime work has remained at 3.3 hours. As a result of the brightened employment picture, household incomes have risen sharply this year. The March increase in personal income, at about a 20 percent annual rate, was the largest since these statistics began being reported.

Unemployment is down substantially from the level reached last fall, but is little improved from a year earlier. The unemployment rate declined to 7.3 percent in mid-March, regaining the January level (see chart). In terms of raw numbers, 7.1 million people were out of work in mid-March, a drop of about 100,000 from the February level. Declines in unemployment have been especially pronounced among heads of households. Unemployment among adult women and teenagers remains near its recession high. It has often been said that these workers are "the last to be hired and the first to be fired."

Increased Demand

Consumer spending rose markedly in the first quarter, and the flow of saving moderated. Personal consumption expenditures expanded $34.8 billion in the March quarter, somewhat larger than the increase in the preceding quarter. Increased household expenditures for automobiles accounted for about one-third of the gain. Monthly retail sales statistics indicate that following the weather-induced January dip, sales jumped rapidly (see chart). Rising consumer expenditures were made possible by a strong growth in income, and from consumers' desire to reduce their saving rate — to 5 percent, down from 5.6 percent in the fourth quarter of 1976.

Business capital expenditures registered a significant first-quarter gain. Investment in plant and equipment rose $7.5 billion compared with a meager $2.6 billion rise in the fourth quarter. Durable goods orders rose 6.8 percent in March. Even so, expenditure increases of this magnitude barely keep pace with the rate of inflation.

The US trade position worsened in the first quarter, as imports exceeded exports by $4.9 billion (annual rate). Heavy US purchases of expensive foreign oil were a chief factor accounting for the deterioration.

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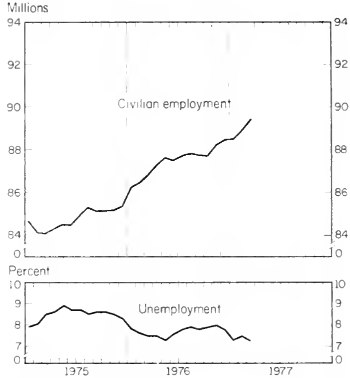
Employment and Unemployment



Source: US Department of Labor.

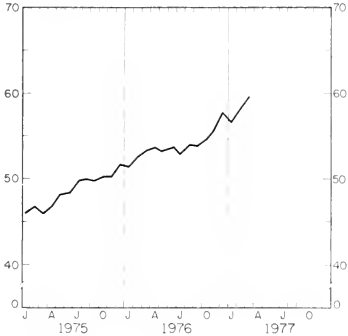
Accelerated Inflation

Price increases quickened in the first quarter. The general level of prices rose 6.6 percent, with higher food prices accounting for a substantial part of the increase. Government economists take the view that temporary factors are causing the rapid price increases. Both consumer and wholesale prices have moved up, suggesting that the price pressures are pervasive. Consumer prices have risen at an 8.1 percent rate since the fourth quarter, and wholesale prices have risen at an 8.4 percent rate (see chart).

The rates of inflation that have characterized the past few years are quite high by historical standards. In terms of recent US price history, 1967 is a "watershed" year. In the preceding decade, consumer prices had risen at an average annual rate of 2 percent, and wholesale prices had increased at less than a 1 percent average annual rate. However, by 1967 the nation was heavily engaged in the Vietnam War. The economy was expanding its nominal (dollar) income rapidly. At the same time, resources were being increasingly diverted to the production of war-related ends — not toward sustaining sufficient growth in consumer goods to match the growth in consumer incomes.

Unfortunately, inflation rates have not returned to their prewar pace. Experiments at price controls beginning in 1971 may have contributed to supply-demand imbalances. Repeated energy-related problems appear to be driving costs higher. Adverse weather conditions in the US and throughout the world have, from time to time, created food scarcities. Thus, as it turns out, a series of "temporary" factors has created several years of rapid inflation by US standards. Presumably, however, "temporary" price increases will continue to occur.

Retail Sales



Source: US Department of Commerce.

Passive Monetary Policy

Monetary growth rates remain well within the target range announced earlier by Chairman Burns. The monetary base (currency plus bank reserves) has risen more than 7 percent over the past year. Changes in the monetary base are caused in large measure by purchases and sales of government securities. Accordingly, some analysts interpret monetary policy actions in terms of shifts in growth rates of the base.

Money supply growth has remained reasonably stable over the past year. Since December, the money stock has expanded at a 7.5 percent rate, somewhat more rapid than the 6.2 percent growth over the past year. The money supply plus time deposits (sometimes referred to as M_2) maintained a stable growth rate of about 10 percent during the past year.

Changes in the growth of monetary aggregates — such as the monetary base and the money supply — are affected by shifts in the demand for credit. If there are upward interest rate pressures reflecting increased credit demands, the Federal Reserve is likely to engage in open market purchases. The Fed tends to moderate what would otherwise be abrupt movements in interest rates. Open market purchases serve to increase the monetary base and, hence, the money supply. In contrast, downward interest rate pressures tend to be associated with a moderation in money supply growth.

Loan demands have strengthened since last summer. Bank loans have expanded at about a 10 percent rate since August. The increase in loans was accomplished while banks were also increasing their investment portfolios. Notwithstanding the growth of credit, interest rates remain generally weak. Historical perspective gives investors little guidance in coping with current credit markets. Although economic activity has expanded for two full years, interest rates are lower now than they were at the trough of the 1973–75 recession. Over the past five months interest rates have been virtually unchanged, fluctuating within a narrow range — of about 25 basis points.

Evolving Fiscal Initiatives

Fiscal policy will tend to tighten over the next year unless new initiatives are undertaken. According to the Budget Message on 22 February, federal expenditures will rise 11 percent in the fiscal year ending 30 September, then 10 percent in fiscal 1978. By comparison, expenditures rose 21 percent in 1975 and 12 percent last year. While the budget position will remain in deficit, it will move toward balance over the next several years.

In light of the improvement in economic activity *without* significant additional fiscal measures, it is likely that President Carter may be willing to abandon some of his stimulus package. Indeed, he has already given ground on his proposal for a $50 rebate. Some political observers believe he may "horsetrade" features of his stimulus package in return for support of his energy program.

Even so, the Administration's stimulus package is wending its way through Congress. Issues will be resolved through persuasion or compromise. The major risk of compromise is that it often results in the marriage of portions of several programs — without regard to whether the marriage can be harmonious. As a result, the economy is frequently burdened with one more unworkable program.

In any event, a stimulus program will emerge at length. We are hopeful that its stimulative effects will surface in time to be of benefit to the economy. In particular, we hope that the stimulative impact will not simply add to inflationary pressures.

WILLIAM R. BRYAN

Wholesale and Consumer Prices

Source: US Bureau of Labor Statistics.

Local Illinois Developments

Crops Down in 1976

Corn and soybean production of Illinois farms declined last year. Illinois farmers harvested 23.1 million acres of crops during 1976, up slightly from 22.9 million acres in 1975. However, yields for most crops were below their record 1975 levels.

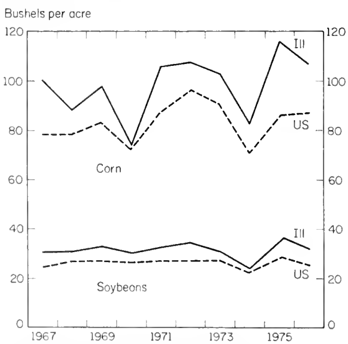
Corn production in Illinois was estimated at 1,251 million bushels last year, only slightly less than 1975's record high. Although the 1976 acreage was 8 percent above the 1975 level, the yield of 107 bushels per acre was down 8 percent from the 1975 yield of 116 bushels. Yields were lower because of below-normal moisture supplies throughout the summer. Even so, yields in 1976 remained above most other years in the past decade.

Soybean production, totaling 242 million bushels in 1976, was down 18 percent from the previous year. Farmers in Illinois harvested 8 percent fewer acres; yields, at 32 bushels, declined more than 11 percent. Again, dry summer weather cut production.

As in the recent past, Illinois crop yields in 1976 exceeded national averages. Outputs of corn and soybeans were 22 percent and 25 percent higher than their respective national averages (see chart). In addition, winter wheat yielded 39.0 bushels per acre, 9.3 bushels more than the national average. Oat yield in Illinois was 12.6 bushels more than the US average of 45.4 bushels.

Illinois farmers have indicated that they either have planted or intend to plant 23.4 million acres in 1977. This is an increase of 50,000 acres, or 0.2 percent, from the 1976 total planted acres.

Corn and Soybean Yields, US and Illinois



Source: Illinois Cooperative Crop Reporting Service.

Illinois Business Indexes

Item	Feb. 1977 (1967 =100)	Percentage change from	
		Jan. 1977	Feb. 1976
Employment — manufacturing[1]	86.6[a]	+ 0.1	+ 0.7
Weekly earnings — manufacturing[1]	190.2[a]	− 1.5	+ 4.4
Consumer prices in Chicago[2]	171.2	+ 1.0	+ 6.0
Life insurance sales (ordinary)[3]	217.6	+ 9.9	+13.4
Retail sales[4]	173.5[b]	− 30.0	+ 4.5
Farm prices[5]	199.0	+ 1.0	− 1.0
Bank debits[6]	430.7[c]	+ 4.7	+ 9.1
Building permits — residential[4]	44.9	+142.9	+ 5.2
Coal production[7]	56.2	− 17.2	−39.8
Petroleum production[8]	41.9	− 6.0	+10.2

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Fed. Res. Bd.; [7] Ill. Dept. of Mines; [8] Ill. Geol. Survey.
[a] Preliminary. [b] Data for January 1977 compared with December 1976 and January 1976. [c] Seasonally adjusted.

Illinois Population Ages

In 1976, 64 percent of the state's population was 21 years or older compared with 61 percent in 1970. Because of the slowing birth rate, the percentage of children under 5 has fallen 1.2 points, from 8.4 percent in 1970. Declining school enrollment in Illinois reflects fewer children between the ages of 5 and 17, down 2.3 points from 25.7 percent of the population in 1970. The category 18 to 44, the baby-boom generation, increased; 38.3 percent of Illinois residents are in this category compared with 34.9 percent in 1970. Illinois residents between the ages of 45 and 64 now account for 19.0 percent of the population, down 2.1 points during the period. The over-65 group was the only other portion of the population showing an increase, 10.4 percent compared with 9.8 percent six years earlier.

The Illinois changes were very similar to those of the US. Only the age group 45 to 64 showed much difference: 20.4 percent in the US, compared with 19.0 percent in Illinois.

Recognizing the Environment

Within the past decade the natural environment has been explicitly recognized as our most important resource. On 1 January 1970 the President signed into law the National Environmental Policy Act (NEPA), which provided the legal framework for government to "use all practical means and measures, including financial and technical assistance" to promote environmental harmony.

The Environmental Protection Agency (EPA) was also established in 1970. As a result, many environmental protection programs previously scattered among several branches of the government were brought together in one federal agency. EPA's mandate was to mount an integrated and coordinated attack on pollution in cooperation with state and local governments. EPA is required to establish and enforce environmental standards for pollution control. The states are responsible for their own implementation plans for meeting the standards, and the federal EPA shares enforcement only if state enforcement is inadequate.

Capital expenditures made by United States manufacturers to try to meet these abatement standards amounted to over $3 billion in 1974. In addition, operating costs relating to pollution abatement (including payments to government units) totaled another $3 billion that year.

What Illinois Has Done

This state's legal approach to the problem of pollution was initiated with the passing of the Environmental Protection Act of 1970. Responsibility for pollution control was divided among three agencies — the Pollution Control Board (PCB), the Illinois Environmental Protection Agency (IEPA), and the Illinois Institute for Environmental Quality (IEQ). The PCB, a five-member board, is primarily responsible for the adoption of environmental laws and standards and is the state judicial body for environmental affairs. The IEPA is responsible for surveillance and enforcement and the IEQ provides the necessary research and technical expertise.

The financial outlays of the state government have been substantial. In 1976 state budget appropriations for the environment amounted to approximately $480 million, a 71 percent increase over 1975. Through fiscal 1977 more than $495 million in state funds and $1.1 billion in federal assistance will have been made available for needed wastewater pollution control facilities alone.

The Illinois program is considered one of the strongest in the nation. Since 1970 the PCB has seen more than 900 enforcement cases (18.4 percent of which have been filed by citizens), has granted more than 1,700 variances, and has levied $1.7 million in penalties. The results have been substantial. Average annual statewide concentrations of particulate matter (dust), sulfur dioxide, and nitrogen dioxides have dropped below the health-related ambient air quality standards. In 1976 approximately 85 percent of the major air and water pollution sources were in compliance with national standards or were on special timetable programs to meet the standards. Overall water quality has been improved by state and federal grants which have paid 75 percent of the cost of more than $950 million worth of wastewater treatment facility construction since 1973. Additionally, Illinois is one of the few states requiring an economic impact study in connection with each proposed environmental regulation.

In the area of land pollution and refuse disposal, the PCB in 1973 adopted a set of Solid Waste Rules and Regulations that established stringent operating requirements for sanitary landfills and a sophisticated permit system. Open dumping was prohibited in the State as early as 1966 and by 1974 open dumps had, in effect, been eliminated. The IEPA's permit denial rate is estimated to be four times the rate of permit issuance, suggesting the vigorous inspection by the agency. As a result of such a staunch enforcement program, almost 300 (80 percent) of the state's sanitary landfills now have state permits and it is expected that the remaining ones will soon be in compliance with the law.

The Illinois Industrial Pollution Control Financing Authority has been given the power to issue up to $500 million in bonds to help finance pollution control facilities for small businesses. It is estimated that $95 million will be issued in fiscal year 1977 alone.

Illinois industry spent well over $300 million in 1974 for pollution abatement capital and control costs. The market has generally responded well to these needs — more than 130 private firms in Illinois currently manufacture pollution equipment or supply environmental services to business.

The Illinois Institute for Environmental Quality has recently launched a "Master Plan for Environmental/Energy Higher Education in Illinois." The General Assembly has recognized that problems of environmental protection and energy conservation should receive a greatly expanded emphasis in the state's overall educational policy. Academic programs are being expanded throughout the State to meet the ever-growing needs for manpower trained in the environmental area. Applied degree programs and basic research facilities have been established and expanded in almost every state university within the past five years.

Illinois is the home of one of the nation's largest federally funded research and development centers — Argonne National Laboratory, located in DuPage County. The laboratory carries out broad research and development programs in the physical, biomedical, and environmental sciences. Although much of Argonne's activity is directly related to national research and development, a small but significant amount of work is being done directly for the State.

Comparative Economic Data for Selected Illinois Cities, February 1977

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Bank debits[4] (000,000)	Estimated work force unemployed[5] (percent)
ILLINOIS		$36,420[a]	3,554.9[a]	$43,589[a]	$2,318,004[a]	6.8[b]
Percentage change from	Jan. 1977	−13.9	−0.3	+9.0	+4.7	
	Feb. 1976	−57.4	n.a.	+4.6	+9.1	
NORTHERN ILLINOIS						
Chicago		$13,036	1,815.0	$33,561		
Percentage change from	Jan. 1977	−4.7	+1.6	+11.0		
	Feb. 1976	−78.1	+6.8	+4.0		
Aurora		$ 899	151.9	$ 478		
Percentage change from	Jan. 1977	+36.7	−8.9	+8.4	$2,222,895[b]	6.0[b]
	Feb. 1976	−80.2	+4.1	+11.7	+4.9	
Elgin		$ 1,079	89.3	$ 481	+8.9	
Percentage change from	Jan. 1977	+0.1	−3.1	−1.8		
	Feb. 1976	−13.1	+9.3	+22.4		
Joliet		$ 7,611	358.8	$ 340		
Percentage change from	Jan. 1977	+749.6	−4.8	+20.6		
	Feb. 1976	+2,249.8	−9.0	+49.1		
Kankakee		$ 49	78.9[c]	$ 180	n.a.	n.a.
Percentage change from	Jan. 1977	−7.4	+4.4	−2.7		
	Feb. 1976	−45.8	+6.0	−5.3		
Rock Island-Moline		$ 819	115.0[d]	$ 1,302	$ 20,925[b]	5.6[b]
Percentage change from	Jan. 1977	−73.1	−1.7	+4.2	−1.6	
	Feb. 1976	+18.3	−3.9	+28.9	+36.5	
Rockford		$ 1,862	171.6	$ 829	$ 11,203[b]	7.1[b]
Percentage change from	Jan. 1977	+92.9	+5.7	−3.5	−0.3	
	Feb. 1976	+37.2	+8.3	+2.1	+21.4	
CENTRAL ILLINOIS						
Bloomington-Normal		$ 1,361	47.4	$ 779	$ 8,583[b]	5.3[b]
Percentage change from	Jan. 1977	−33.3	+2.2	−2.6	−1.1	
	Feb. 1976	−38.1	n.a.	−1.3	+11.5	
Champaign-Urbana		$ 754	51.5	$ 726	$ 6,635[b]	5.3[b]
Percentage change from	Jan. 1977	+124.5	+15.2	+14.7	+2.5	
	Feb. 1976	−77.1	n.a.	+7.2	+13.2	
Danville		$ 227	45.9	$ 529	$ 2,888	n.a.
Percentage change from	Jan. 1977	+156.9	+9.3	+42.6	+12.4	
	Feb. 1976	+22.4	n.a.	+13.5	+20.8	
Decatur		$ 1,871	109.1	$ 428	$ 7,343[b]	9.4[b]
Percentage change from	Jan. 1977	+167.3	+4.4	+5.7	−5.5	
	Feb. 1976	+59.5	n.a.	+3.1	−2.8	
Galesburg		$ 1,766	33.0[c]	$ 153	n.a.	n.a.
Percentage change from	Jan. 1977	−78.7	+6.5	−1.3		
	Feb. 1976	+880.8	n.a.	−3.2		
Peoria		$ 2,418	189.9	$ 1,230	$ 17,460[b]	6.3[b]
Percentage change from	Jan. 1977	+40.3	+2.9	+7.7	−6.5	
	Feb. 1976	+89.3	+3.8	+8.8	+6.1	
Quincy		$ 135	44.5	$ 197	$ 3,306	n.a.
Percentage change from	Jan. 1977	−28.8	+0.2	−9.2	+6.1	
	Feb. 1976	−93.7	+13.5	+0.5	+27.5	
Springfield		$ 1,685	102.1	$ 1,602	$ 16,766[b]	8.1[b]
Percentage change from	Jan. 1977	+262.4	−21.3	−7.6	+9.2	
	Feb. 1976	+84.6	+6.4	+2.4	+11.2	
SOUTHERN ILLINOIS						
East St. Louis		$ 79	26.6	$ 152	n.a.	
Percentage change from	Jan. 1977	−32.8	−1.1	−15.1		
	Feb. 1976	−92.1	−7.0	−11.1		
Alton		$ 87	66.5	$ 121	n.a.	
Percentage change from	Jan. 1977	+37.2	−9.3	+1.7		7.8[e]
	Feb. 1976	−95.5	−7.6	+10.0		
Belleville		$ 236	24.1	$ 237	n.a.	
Percentage change from	Jan. 1977	+127.5	−7.0	−2.1		
	Feb. 1976	+44.8	n.a.	+6.8		
Carbondale-Murphysboro		$ 396	33.8	$ 264	n.a.	n.a.
Percentage change from	Jan. 1977	−99.5	−7.0	+8.6		
	Feb. 1976	−96.8	+18.6	+29.2		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 25 February 1977. [4] Federal Reserve Board; seasonally adjusted. [5] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Madison and St. Clair counties. n.a. Not available.

EFTS: An Evolution of the Payments System

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The term EFTS, for Electronic Funds Transfer System, is being heard with increasing regularity. It is discussed by legislators, bankers, the courts, and special commissions established to study EFTS. What is EFTS? Is it important? What impact will it have? On whom? This article places EFTS in perspective as a stage of evolution in the nation's payments system. I shall also take a quick look at what EFTS is (or may become) and suggest the impact it may have. Finally, the development of an EFTS in Illinois will be described.

The Payments System

In a monetary economy such as the US, the exchange of goods and services is facilitated by the use of money. Although what constitutes "money" is a subject of debate among economists, today we use coins, currency, and checking account deposits to make payments for goods and services. The most familiar form of money is coin and currency. However, these make up only about one-fourth of the stock of money in the US and account for only about one-tenth of the dollar amount of payments made. Checking account deposits dominate as the kind of money used in most transactions. Thus the payments system is dominated by the use of checks drawn on commercial banks. The extensive use of this form of payment is relatively new; only since the late 1800s has checking account money been widely used.

Since checking account money payments require the use of a piece of paper (the check), this payments system requires the handling of large numbers of these pieces of paper. Each check represents authorization to reduce the balance of the writer's checking account and, unless taken in coin and currency, increase the balance of the recipient's checking account. When these checking accounts are in two different commercial banks, there must exist a means of arranging the proper changes in each balance. It is this task that is carried out by the payments system. This system involves and is operated by the Federal Reserve System and all commercial banks.

Why Is EFTS Being Developed?

The payments system has had to handle an increasing volume of checks over the years. Although estimates vary, it is projected that 30 billion checks will be processed in 1977 and that this figure is growing at about 7 percent a year. This means that volume doubles every 10 years. With this increase have also come improvements in the methods of handling these checks. Machines read and sort the checks according to the machine-readable symbols imprinted on each check. However, many functions are still performed by hand. In view of rising labor costs it is difficult to foresee a continuation in the decline in the average cost of processing a check (now about 30 cents). Economies of scale may have been exhausted.

The pressures of rising check volumes and the inability to further reduce costs have caused many to seek another method of making payments. Increased pressures for change have also resulted from the desire of all financial institutions (including savings and loan associations, credit unions, and mutual savings banks) to increase their retail markets by attracting more depositors and borrowers. Much of this pressure comes from the nonbank institutions, which realize that they must get involved in the payments system to increase their market share. If the paper check which carries the payment information could be replaced by an electronic signal, manual processing could be reduced and the payments transfers could be completed more quickly, and nonbank institutions could become an integral part of such a new system. This is the hope of the financial institutions for an electronic funds transfer system.

Paralleling the increased pressures for EFTS from the financial institutions has been the improvement in and increased use of the computer. The computer is essential to any EFTS in that it provides the capability of processing huge amounts of data in short periods of time. Another contributing force for the development of EFTS is the increased use of the bank credit card. Such a card plays a key role in many EFT systems and customer acceptance and use of these cards is a necessary step for accomplishing funds transfers electronically.

The Shape of an Evolving EFTS

An EFTS is not an all-encompassing panacea that will sweep all paper-based payments aside. EFTS is manifested in many ways, in many small improvements affecting different parts of the payments system. It is more correctly described as evolutionary, rather than revolutionary. Most of the elements of the EFTS are in use in different parts of the US today although none is in nationwide use. Let us examine some of the developments that are included under the EFTS umbrella.

Automated Clearing Houses (ACHs). Clearing houses have existed for years for the clearing of checks drawn on and payable to each of the local banks participating in the clearing house. In an automated clearing house the additions to and subtractions from balances are in the form of electronic signals, usually on computer tape, rather than paper checks. This facility makes possible the direct deposit of pay into employee accounts at participating banks by use of a computer tape prepared by the

firm. Also many regular, recurring payments such as insurance premiums and mortgage payments can be made automatically to recipient firms from depositors' accounts. In all of these cases the need for paper checks and manual processing is eliminated.

Automated Teller Machines (ATMs). Such machines, either manned or unmanned, can expand the reach of a bank to areas beyond its usual physical facilities. These machines can perform services such as receiving deposits, dispensing cash from checking or savings accounts, transferring funds between accounts, and receiving loan payments. Besides expanding the geographic reach of the bank, ATMs also reduce the number of paper checks required, replacing them with electronic impulses from the ATM to the bank's computer.

Point of Sale (POS) Systems. These systems offer perhaps the greatest possibilities for reducing the use of paper checks. At its most developed level, a POS system consists of a computer connection between retail establishments and a bank. A retail customer pays for a purchase by having funds transferred electronically from his account to the merchant's account. Such transactions may be accomplished through the use of a "debit card" which contains the purchaser's account information. This card is inserted in the computer terminal at the merchant's location, the price of the transaction is keyed in, and the transfer is automatically made, with a receipt printed for each participant.

An earlier stage in POS systems utilizes the computer terminals for check authorizations. The merchant's computer terminal is used to access the check writer's account to assure that the necessary funds are present. Although this system reduces merchant losses from returned checks, it does not directly result in a reduction of checks written.

Roadblocks to EFTS

The automated clearing houses, automated teller machines, and point of sale systems are only three facets of an evolving EFTS. Other means of converting transactions from a paper-based system to an electronic system are being developed. However, many important issues remain to be settled before even these three facets of EFTS can become widely used.

Technically, electronic transfers can be made from any kind of deposit account, checking or savings. Unless legal and regulatory definitions become uniform for all financial institutions, the nonbank thrift institutions may be able to compete more aggressively for customer deposits. Currently the Federal Home Loan Bank Board, the regulator for federally chartered savings and loan associations, allows the use of remote computer terminals at any location for these savings and loan associations. This competition is creating a situation to which commercial banks must respond in order to maintain consumer deposits. Likewise, regulators and legislators must decide whether to approve this new role for all nonbank thrift institutions.

The response of commercial banks to this challenge has been hampered, in part, by laws designed for a different technological environment. An attempt by two banks in Chicago to establish ATMs separated from the main office illustrates this problem. These ATMs in Illinois were declared by the courts to be branches and thus not allowed under Illinois law that prohibits branch banking. This legal stand has been duplicated in other unit banking and limited branching states. If banks join together to pool knowledge and share the costs of developing an EFTS, further complications can result. The US Justice Department recently objected to a proposed joint venture among Nebraska banks to develop a statewide EFTS. The department's Antitrust Division indicated that there was not enough evidence to support the need for an EFTS and that the joint venture could violate federal antitrust laws.

Will the spread of EFTS result in the hoped-for economies in handling payments? The answer to this question is not clear. Certainly a huge investment in equipment will be necessary and start-up costs will be significant. However, since labor and other variable costs will be very low, processing a large volume of payments electronically should eventually lower the unit costs of processing. Still, this remains a projection and not a fact.

In order to obtain the volume needed to achieve lower unit costs, a substantial portion of present payments must be switched to electronic payments. Will customers accept and use these alternative means of making payments? There seems to be little incentive for customers to demand a change from a paper check to an electronic transfer system. From the consumer's point of view the present payments system seems to be working well. The check is a reliable method of making payments and provides many conveniences to the check writer. The typical bank practice of not charging the full cost of check processing has insulated the checking account holder from the rising costs of check processing. Thus the benefits of lower processing costs, if they materialize, will accrue to banks rather than checking account holders.

Other issues of significant concern impede consumer acceptance of EFTS: the loss of control over the transfer of funds, the loss of float that results from instantaneous payments, and fears of possible misuse of large amounts of individual financial information stored in computers. The increased convenience of EFTS to customers will have to be emphasized, and perhaps expanded, to offset these consumer concerns. Controls will have to be established, as has been recently suggested by the National Commission on Electronic Fund Transfers, to assure that proper safeguards exist to protect the consumer.

EFTS in Illinois

EFTS is developing in Illinois. Many banks have some form of automated teller machine that provides a limited set of banking services on a continuous basis (24-hour-a-day cash dispensing, for example). Because of the court decision involving the Chicago banks, these automated teller machines are located on bank premises.

A more ambitious development is EFI or Electronic Funds Illinois, sponsored by the Illinois Bankers Association. This is a network of Illinois banks that are hooked into a computerized communications system that allows the depositor of any one of the member banks to cash checks at any other EFI member bank without charge. The customer provides an encoded plastic card which the bank can plug into the computer network to verify the account status. This is, of course, only the initial stage of service planned by EFI. The computer network could be capable of making funds transfers among banks to eliminate the need for checks. A further development would result in the linking of retail stores to the network so that purchases could be paid for with an electronic transfer of funds. Although it is now planned to be simply a check verification system, EFI lays the groundwork for the possible development of a more sophisticated payments system throughout the State.

In Illinois, as in other unit banking states, the further development of EFTS has been slowed by laws and court decisions. Owing to the court decision that ATMs and other bank communication devices separated from a bank's facilities are branches, the progression of EFTS is in jeopardy. The Illinois state legislature has established a Commission on Electronic Funds Transfer to study the issues and make legislative recommendations. This commission has issued an interim report but its life has been extended to investigate the matter further. Interest groups have been actively articulating their positions.

It is because the issues of EFTS are intertwined with the issues of banking structure (for example, branching and multioffice bank holding companies) that progress is slow. Many critical issues must be resolved before a complete, statewide EFTS can develop. Still, local and regional efforts involving ATMs, check verification arrangements, and automatic deposit and payment of some items continue to grow, leading to some benefits for the state's payments system.

Conclusion

Advances in technology, competitive pressures among financial institutions, and an increasing volume of paper checks have coalesced to assure that the EFTS evolution will continue. The final form may be different from that envisioned now and the implementation time may be longer (or shorter) than projected, but EFTS is coming in a variety of forms. Local EFT systems may not be linked into a nationwide system as was anticipated by some several years ago; however, the pressures for change will not permit the current pattern of EFTS to fall apart. Electronic transfers of funds will increase and may dominate paper check payments in the future just as, a century ago, paper checks came to dominate coin and currency payments.

What New York City Has Done to Avoid Bankruptcy

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Early in 1975 the banks in New York City closed the normal financial markets to the city's borrowing. This action was taken because of mounting bank concern about the city's practice, over a long period of years, of borrowing money from the banks and then using capital to pay operating expenses. The closing of these financial markets provoked a panic for Mayor Beame and other officials responsible for meeting payrolls and other costs of running the city government.

Roy Bahl, professor of economics and director of the Metropolitan Studies Program at Syracuse University, summarized the situation for New York State in the following manner:

> New York State's fiscal problem is that its public sector is overdeveloped. The State resource base will no longer support the high load of public services provided in the State unless tax rates are continuously increased . . . the State has retained its dominance and relative national role in state-local fiscal activity. This can no longer be done. A period of downward transition must be recognized and policy should center on selecting priorities in the adjustment of public service levels.

New York City's fiscal problem is the same as that for New York State, namely, its public sector is overdeveloped.

The dilemma facing New York City was caused primarily by (1) failure to collect vast amounts of taxes due and owing to the city, (2) excessive expenditures for welfare and education, and (3) payments in wages and fringe benefits including pensions far in excess of similar payments in the federal government and in other cities around the nation.

To prevent bankruptcy, Mayor Beame with other city officials early in 1975 went before the Senate Committee on Banking, Housing, and Urban Affairs in Washington seeking loans from the federal government to give them time to make adjustments needed for balancing income with expenditures. Following a series of hearings, Congress passed the New York City Seasonal Financing Act of 1975. This act provided for (1) loans up to $2.3 billion a year during a three-year period, (2) total repayment of these loans with interest at scheduled dates within the three-year period, (3) specific actions by New York City which would enable them to balance the city's budget by 30 June 1978, and (4) an understanding that after 30 June 1978, New York City would be on its own and would no longer be able to look to the federal government for loans to help the city bring its budget into balance.

City Actions Taken to Avoid Bankruptcy

Immediately following the passage of the New York City Seasonal Financing Act of 1975, Secretary of the Treasury Simon hired Arthur Andersen and Company to help straighten out the financial mess in New York City. They were asked to set up a long-term reporting and accounting system which would help avert a recurrence of a future loss of market for New York City securities. In a report to the US Treasury in the latter part of 1976, Arthur Andersen concluded that New York City had taken the necessary administrative steps to implement its deficit reduction program in concrete terms. The report stated that

> Since the beginning of the financial crisis, New York has reduced the size of its payrolls by more than 50,000 jobs;
>
> The city has reached agreements with its unions, representing more than 200,000 employees, providing for a wage-freeze through fiscal 1978 and a $24 million reduction in fringe benefits;
>
> The city has closed down all or major portions of three hospitals and expects to close down additional health facilities; and
>
> The city has ended a century-old tradition of free tuition at its City University and has announced it will not contribute to the operating expenses of CUNY's senior colleges in fiscal 1978.

These measures and many others resulted in achievement of the objective of $200 million in budget cuts in 1976. Moreover, according to the Andersen review, the necessary administrative actions to accomplish a $400 million budget reduction in the current year (1977) were on schedule. With this, there is a substantial basis for concluding that at least $400 million in budget reductions will be realized in fiscal 1977.

In addition to the specific items listed, the Andersen report concluded that the city's present financial reporting, record-keeping, and control systems were inadequate. In this connection, Andersen reported that Touche Ross and Company and American Management Systems were designing a new accounting and controls system to be in place 1 July 1977. It is believed that this system will aid in controlling unbudgeted spending which, up to this time, has been a problem of serious concern.

Another plus factor in the picture is that not only have loans made by the federal government to the city been paid on or ahead of time but it appears that, at the end of 1976, the loan program to New York City had cost the federal government nothing. Secretary Simon stated that in 1976 the federal government would net $12 million to $13 million over and above all costs including interest and administration. From the viewpoint of New York City, total costs for federal loans were less than they would have been had they been obtained from city banks.

Let us now examine in some detail what New York City has done toward reducing its deficit so that it can obtain its objective of a balanced budget by 30 June 1978. This examination will include actions taken by the city to collect unpaid taxes, to reduce excessive welfare and education costs, and to reduce excessive costs for wages and fringe benefits.

More Auditing to Improve Tax Collections

Failure to collect taxes has been one of the underlying causes of deficits in the budget of New York City. Records showed that uncollected taxes for the city in early 1975 were as follows (in millions of dollars):

Real estate taxes	500
Corporate taxes	200
Parking fees	200
Income taxes	100
Cigarette taxes	100
Other (8 or 9 taxes)	200
Total uncollected taxes	1,300

Concerning this problem, Senator William Proxmire made the suggestion that New York City follow Wisconsin's example of increasing the number of auditors. With more auditors a greater effort could be made to identify those not paying taxes owed the city. Proxmire asserted that a study of Wisconsin's experience showed that auditors in that state collected more than 10 times the cost of those auditors.

Mayor Beame reported that New York City had acted on this suggestion and substantially increased the number of auditors assigned to collect taxes. Results of this action will accompany a more complete reporting and accounting scheduled to be in effect as of 1 July 1977.

Cutting Costs of Welfare and Education

As stated earlier, New York City has ended free tuition at its City University and has announced it will not contribute to the operating expenses of CUNY's senior colleges in fiscal 1978. This action, accounting for the chief reduction in education costs, will reduce the city's expenditures about $150 million a year.

Senior colleges in New York City have now been incorporated into New York State's system of higher education. Tuition for these colleges will be charged on the same basis as for other senior colleges in the New York State system.

Over a long period of years, senior colleges in New York City have been a great asset to the city. It is pleasing to know that its senior colleges will continue to serve the city even though enrollments, because of tuition, are likely to be somewhat less than formerly.

Other cuts in budget in 1977 and 1978 as reported by Mayor Beame include $147 million for education in elementary and high schools, $57 million in health and hospitals (includes closing of three city hospitals), and a $60 million reduction in welfare costs. Reductions for these services, for the most part, are small relative to the total amounts still being paid for them.

Reducing Wages and Fringe Benefits

Excessive payments for wages and fringe benefits are another factor underlying New York City's inability to balance its budget. In 1976 the average income for New York City employees was $26,000, 40 percent more than for employees of the federal government. With 230,000

full-time employees in New York City, the net difference of $7,500 per employee indicates that if the city could reduce the average wage to the federal level, it could cut its wage bill by $1.7 billion a year.

Fringe benefits in New York City in 1976 averaged 68.7 percent of the base pay. This was more than double the average of fringe benefits of 33 percent received by state and local governments generally.

Another factor affecting New York City expenditures is excessive pensions. Currently for those who retire at 65, pensions are 125 percent of the take-home pay of the employee during his last year at work. This compares with 43 percent in Atlanta, 47 percent in Chicago, 52 percent in Dallas, and 54 percent in Los Angeles and Memphis. Two of the highest-pension cities other than New York are Denver with 91 percent and Detroit with 104 percent. Patrolmen in New York City work an average of 35 to 37½ hours a week as compared with a normal period of 40 hours in other cities.

On the plus side, the members of the city's work force have come through in good style to help city officials meet its financial crisis. This includes (1) acceptance by over 200,000 union members of a three-year wage freeze and a $24 million cut in fringe benefits; (2) acceptance of a reduction of more than 60,000 in the number of city employees since 1975; and (3) efforts in each department to increase efficiency. For example, with a decrease of 19 percent in numbers, response time to fire alarms has not increased since 1975 despite a 26 percent increase in the number of alarms. A decrease of 21 percent in personnel in the sanitation department has been offset by an increase in tonnage of refuse per truck shift. In the parks department, 50 percent of the seasonal employees have been separated and 25 percent of the overall staff. Despite this, the department has continued to operate reasonably well.

1975 Moratorium Act Unconstitutional

As one way of meeting the financial crisis in 1975, New York State passed an Emergency Moratorium Act. This law suspended the judgment on short-term city notes for a three-year period ending 15 November 1978. City notes included $983 million of notes held by the public. In addition, about $819 million of notes were held by New York City commercial banks and by the city's five actuarially funded pension systems.

The state legislature also established the Municipal Assistance Corporation (MAC) and gave it power to sell debt obligations up to $3 billion. The proceeds could be made available to the city. The agency was also to try to untangle the city's finances and help the city develop a budgetary plan to achieve a balanced budget.

On 19 November 1976, the New York State Court of Appeals declared the 1975 Emergency Moratorium Act unconstitutional. Recognizing the city's delicate financial balance, the court rejected instant judicial remedies which would have given the city no choice except to proceed into bankruptcy.

On 15 December 1976, the city and the Municipal Assistance Corporation submitted a proposal for a cash settlement of at least 50 percent of the publicly held moratorium notes by 30 June 1977 and the remainder by 19 November 1977, one year from the court's decision. To relieve pressure while New York City was repaying loans to the federal government, it was suggested that moratorium notes of $1.8 billion of MAC debt held by certain institutions be restructured whereby those holders would voluntarily defer all principal payments until 1982. This would provide $206 million in cash to the city in 1977, $203 million in fiscal 1978, and $170 million in 1979 and 1980.

A logical question is, Would MAC bonds with deferral of principal until 1982 be marketable? An offering of $253 million of MAC bonds in November 1976 was subscribed to by public investors. Certain institutions, including New York State pension funds, commercial banks, and savings banks, indicated that they would have purchased 56 percent of the MAC bonds had they not been sold to public investors. Because of the progress made in balancing the city budget during 1976, Mayor Beame is confident that the moratorium note problem can be resolved without affecting the timetable for repayment of federal loans.

Credit Market Reentry in 1978 or 1979?

There is a difference of opinion as to whether New York City can repay its loans from the federal government on the dates scheduled and be able to reenter the credit market. According to the New York Seasonal Financing Act of 1975, New York City was to have balanced its budget by 30 June 1978 and repaid its government loans. It was further understood the city would not ask Congress for an extension of time for repayment of loans. This would necessitate reentry to the credit market.

One concrete fact is that through 1976, New York City had repaid all federal loans on or ahead of schedule. Secretary Simon believed that the city could repay its loans on schedule and be able to reenter the credit markets in 1979. He told the Committee on Banking, Housing, and Urban Affairs, as shown in the Senate Hearings Report of February 1977, "that he continues to be cautiously optimistic" about the city's prospects.

> . . . if they proceed down the road of achieving budget balance, fiscal and financial credibility at the end of 1978 and have an accounting system that the people can understand and audit, then they can return to the capital markets in 1979.

City and state officials were more cautious about the prospects for New York City reentering the credit markets in late 1978 and somewhat less optimistic. Governor Carey put it this way:

> We will be in technical balance in 1978. But we have to ask the question as to whether a market will open up for a city in which the schools, the state of health, the state of transportation are all in decline. This is a question which I think investors are going to look at as hard as they are going to look at the balanced budget sheet.

In light of the fact that other municipalities around the nation are encountering difficulties similar to those outlined here, New York City's progress in solving its problems will be followed with close interest.

Illinois Business Review

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Publications Available

Planners Handbook

The US Department of Commerce Bureau of Economic Analysis and the Social Security Administration have cooperated to publish a new aid for local planners. The 308-page publication examines the Continuous Work History Sample (1 percent and 10 percent samples of the active work force) and discusses applications of the CWHS, its comparability with other series, and its limitations. CWHS data are expected to be especially useful for planners in such program areas as housing, government service and finance, transportation, health, and manpower development.

Regional Workforce Characteristics and Migration Data: A Handbook on the Social Security Continuous Work History Sample and its Applications is available from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402. The stock number is 003-010-00055-4. The price is $5.10 and payment must accompany the order.

IBR Index

An index for volumes 1 through 32 of the *Illinois Business Review* is available. The index includes (1) a subject index to editorials and feature articles; (2) an author/title index; (3) an author/editorial index; (4) an index to the Know Your State articles; and (5) an index of selected tables (with time span covered). It is available from the Bureau of Economic and Business Research, 408 David Kinley Hall, University of Illinois, Urbana, Illinois 61801. Price: $2.00 prepaid.

A monthly summary of business conditions for Illinois

Illinois Business Review

BUREAU OF ECONOMIC AND BUSINESS RESEARCH / COLLEGE OF COMMERCE / UNIVERSITY OF ILLINOIS

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Improvements in the Illinois Economy

Business activity in Illinois has made progress in recovering from the 1974–75 recession. In general, however, gains have not matched those at the national level.

Gains in Gross State Product

The estimated 1976 gross state product for Illinois reached a record high of $95 billion (see chart), about 6 percent of the national total. The rate of growth over the previous year, 7.6 percent, was substantially less than the 11.6 percent rate for the nation. The estimated gross state product also rose 7.6 percent in 1975, just slightly more than the 7.3 percent growth rate for the gross national product.

All of the industry divisions showed increases in dollar value. Manufacturing accounted for $2.1 billion of the $6.7 billion increase in 1976; retail and wholesale trade increased $1.6 billion. The remaining sectors experienced gains varying from $500 million to $900 million. These sectors were finance, insurance, and real estate; transportation, communication, and utilities; and government.

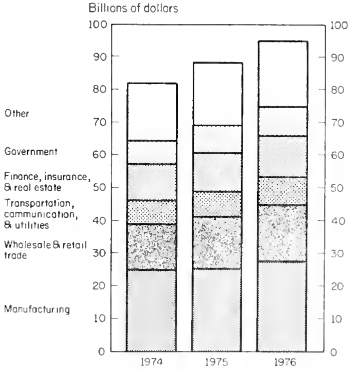
In real terms, the Illinois gross state product increased 2.4 percent over the 1975 figure. By comparison, real state product in 1975 showed a 1.5 percent decline from 1974. Over the period 1961–76, the average annual rate of real growth was 2.5 percent. The recession of 1970 effectively cut long-term growth rates below the 4 percent level of the late 1960s, and the 1974–75 recession further reduced the rates of growth to less than 3 percent.

Prices Still Rising Rapidly

One measure of inflation for Illinois is the consumer price index for the Chicago standard consolidated area. That index continues to climb, registering a 6.7 percent advance from a year ago (see chart). The increase for the nation as a whole was 6.8 percent. Although recent price increases have been marked, they have slowed from earlier rates. For example, prices for the Chicago area rose 7.9 percent in 1975; the US experienced an inflation rate of 9.1 percent. Unfortunately, the rate of inflation has picked up again, with an annual rate of increase of 8.4 percent in March and 9.6 percent in April.

From the beginning of 1974 to April 1977 commodity prices rose less rapidly than the overall index. Food costs advanced 22 percent in the Chicago area compared with a 24.2 percent increase nationally. The rate at which food costs continue to rise will, in large measure, be determined by current drought conditions in large food-producing areas.

Illinois Gross State Product



Source: Illinois Department of Business and Economic Development.

The component most important in pushing commodity prices higher has been the spiraling costs of fuel and utilities. In the past 40 months fuel oil and coal have risen 43.9 percent in Chicago; gas and electricity have gone up 58.7 percent. Nationally, these components rose 44.9 percent and 56.2 percent, respectively. The increases in fuel oil have, in turn, been important factors in pushing the costs of private transportation and housing sharply upward.

Services are playing an increasingly important part in everyday life. Because demand has risen more rapidly than supply, prices have increased significantly, especially since the beginning of 1976. The price of medical care has shown one of the sharpest rises among index groups, chiefly reflecting higher medical insurance and hospital costs. In the past year prices for medical care were up 12.4 percent in the Chicago area, substantially more than the national increase of 7.5 percent.

Chicago — An Important Headquarter City

The Chicago area is home to many of this nation's largest corporations — including producers of food, electronics, drugs, and clothing as well as a wide variety of industrial goods. Sales for the 50 largest firms headquartered in Chicago totaled $74.7 billion in 1976 — an increase of 10.5 percent over 1975. Even so, these sales lagged significantly behind the growth rates of 25 percent and 18 percent in 1974 and 1973, respectively.

Of these 50 firms, 20 had sales of at least $1 billion during 1976. In 1975 only 16 firms achieved $1 billion in sales; 10 firms reached that level in 1974. Such developments reflect inflation as well as actual growth. Higher oil prices have enabled Chicago's Standard Oil Company of Indiana to widen its sales lead over second-ranked International Harvester. While 12 of the top 50 firms experienced drops in sales during 1975, only 4 of the top 50 — GATX Corporation, Amsted Industries, Chemetron Corporation, and International Mineral and Chemical — experienced declines in 1976. The largest percentage gains in sales were achieved by Gould Incorporated (66.5 percent), Masonite Corporation (34.1 percent), Signode Corporation (24.7 percent), and Nalco Chemical (22.8 percent).

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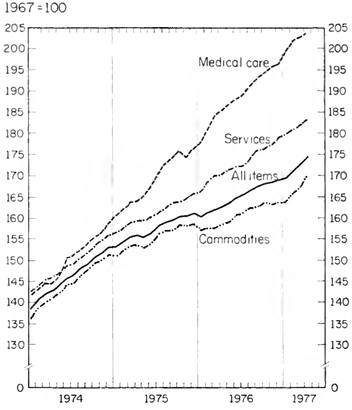
Chicago Consumer Price Index



Source: US Bureau of Labor Statistics.

The banking firms also showed improvement in 1976. Chicago's 15 largest banks, including Continental Illinois, First National, and Harris Trust, had combined assets of $54.0 billion in 1976, up 7 percent from 1975 totals. In addition, the area's 15 largest savings and loan companies had assets of $9.7 billion, up 12.8 percent. Mergers played a role in the apparent growth of some individual associations.

Retail Sales Strong

Consumers in Illinois, as in the nation, gave strong support to the economy. Retail sales in Illinois totaled $38.2 billion in 1976, up 14 percent from 1975. The gain nationally was 12 percent. After showing signs of recovery during 1975, sales of department stores continued to rise in all the Illinois SMSAs during 1976. Chicago, Decatur, St. Louis, and Quincy exhibited increases of 10 percent or more (see chart). In most cities the 1976 gains in department store sales were greater than those in 1975. Even allowing for the 6 percent increase in prices (as measured by the Chicago area consumer price index), the majority of cities continued to make at least some gains over 1975. Only Peoria and Danville experienced a decline in the physical volume of sales.

Employment Picks Up

Employment patterns for the State were mixed during 1976. Total employment in the nonfarm sector rose 1.3 percent, less than one-half the 2.8 percent increase achieved nationally. The following tabulation shows the gains in employment by type of activity for both Illinois

and the US. Except for construction, state employment experienced increases.

	Illinois	US
Total employment	+1.3	+2.8
Mining	+2.0	+6.2
Contract construction	−3.0	−1.5
Manufacturing	+1.7	+2.6
Transportation and public utilities	+0.2	+1.4
Wholesale and retail trade	+1.5	+3.4
Finance, insurance, and real estate	+1.3	+3.6
Services	+2.4	+4.6
Government	+0.2	+1.4

Employment rose in nearly all the Illinois SMSAs, but increases differed markedly. Gains of more than 3 percent occurred in Rockford (3.4 percent), the Rock Island area (3.5 percent), and Decatur (4.1 percent) in 1976. Chicago showed an increase of 2.7 percent. Because of the heavy industrial concentrations in these cities and the heavy layoffs during 1975, these increases show the return of people to work as well as "new" entrants into the labor market. Springfield, Peoria, and Bloomington-Normal had increases of less than 1 percent. Employment declined slightly in Champaign-Urbana.

Unemployment fell to a low of 6.8 percent in June 1976 (seasonally adjusted) after reaching a high of 9.9 percent in October 1975. In the US, unemployment peaked earlier, reaching 9.2 percent in May of 1975.

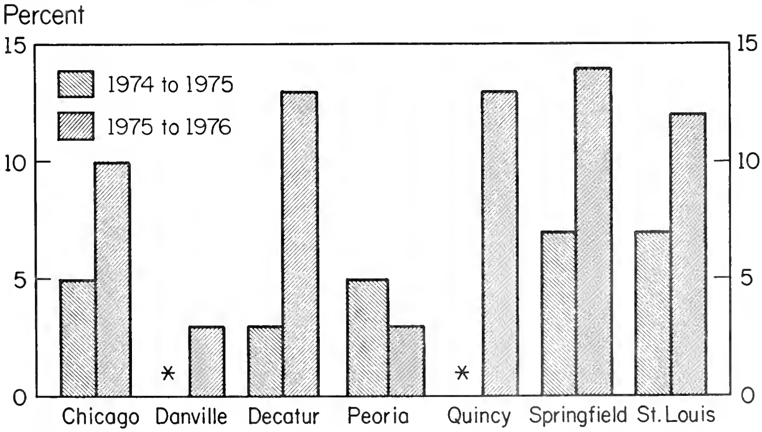
However, recovery in labor markets occurred sooner in Illinois. The April 1977 statistics show unemployment in Illinois continuing to decline with joblessness dropping from 5.5 percent in March to 5.2 percent in April. In the Chicago metropolitan area, there was a decrease from 5.1 percent to 4.9 percent in the past month. A year earlier the Chicago rate stood at 6.5 percent. Although Chicago has shown a drop, the decline has been less than in many downstate communities because of relatively fewer construction jobs in Chicago and a virtual absence of agricultural jobs.

All but one of the downstate metropolitan areas showed declines in their unemployment rates. There was a drop in the Bloomington-Normal area from 3.8 percent to 3.2 percent. Unemployment declined in Champaign-Urbana from 4.1 percent to 3.4 percent, even though employment also fell. The jobless rate in Decatur was cut from 6.7 percent to 5.9 percent, and Peoria went from 4.7 percent to 4.2 percent. In Springfield the rate declined from 6.1 percent to 5.3 percent. The East St. Louis area showed a slight drop from 6.4 percent to 6.3 percent. In the Rockford labor market area, unemployment fell from 6 percent to 5.1 percent.

In the Davenport-Rock Island-Moline area, unemployment registered a small increase — from 4.2 percent to 4.3 percent. Even so, the rate was well below the state average.

These declining unemployment rates are good news for business and industry as well as for the State and the wage earner. It is reasonable to hope that declines will continue. Both an improving economy and an increased number of outdoor jobs, especially in construction, are key factors in the current employment picture.

Department Store Sales, Large SMSAs



Source: US Department of Commerce.

Cement Manufacturing in Illinois

With its economy, durability, and versatility, cement has become the most essential of raw materials used in construction. Hydraulic cement manufacturing and ready-mix concrete establishments have, together, provided the production and distribution services to meet the final demands for this basic product. In 1976, US cement manufacturing firms shipped products valued at $2.7 billion. The industry currently employs nearly 30,000 workers.

The hydraulic cement industry is defined as that group of establishments primarily engaged in manufacturing portland, masonry, and pozzolan cements. It is one of the most "specialized" manufacturing industries, and one with the highest ratio of primary product to total output — hydraulic cement makes up 99 percent of the industry's final products. Moreover, 96 percent of this output is portland cement.

The manufacturing of cement requires a series of fully automated operations to process raw materials containing lime, silica, alumina, and iron. Rock is fed in large pieces into primary and secondary crushers which reduce it to fragments about three-fourths of an inch in size. Correct proportions of the crushed raw materials are fed into a slightly inclined cylindrical kiln which is lined with firebrick and which may be as much as 25 feet in diameter and 750 feet long. The raw materials are heated to about 2700 degrees Fahrenheit until they fuse to form a new, harder substance, called "clinker." The clinker, in marble-sized pellets, is cooled and then ground with gypsum (which regulates the setting time of the cement) into the extremely fine powder of cement. The cement is then either sacked or loaded directly onto trucks or rail cars to be transported.

The end-use markets of cement are residential, 31 percent; industrial and commercial, 24 percent; public buildings, 7 percent; and miscellaneous construction projects, 5 percent. Ready-mix concrete producers are the biggest customers — they purchase about 63 percent of total cement produced. Concrete product manufacturers (block, brick, pipe, and prestressed) buy approximately 14 percent, and building material dealers and highway construction contractors account for about 8 percent. The remainder is purchased by government agencies, private contractors, and others.

The hydraulic cement industry has been perpetually plagued with a fluctuating demand for its product, primarily because of the cyclical nature of building activity. Shipments in 1975 were at the lowest level since 1964, but demand has been bolstered more recently by a pickup in construction activity — especially residential. Prices have risen rapidly in the past two years, with the wholesale price index for cement rising 19 percent in 1975 and about 10 percent last year. Rising energy costs — attributed to the fact that the industry is energy intensive — have been the major cost-push factors. These energy costs currently account for close to half the variable cost of production for the industry. The cement business is the most energy intensive of all manufacturing in the US, and as an industry, it is the sixth largest consumer of energy. The current industry fuel-mix is approximately 31 percent natural gas, 29 percent coal, 20 percent heavy fuel oil, and 17 percent electricity. Raw materials — limestone, clay, shale, gypsum, and other materials — are in ample supply, and no short-run supply problems are envisioned.

Illinois Industry

Illinois has four firms that manufacture hydraulic cement. They include Illinois Cement Company, Oglesby; Marquette Cement Company, LaSalle; Medusa Corporation, Dixon; and Missouri-Portland Cement Company, Joppa. Each employs between 100 and 250 workers. In 1974, state employment in the industry totaled about 540 workers. The population density associated with the Chicago area, plus abundant raw material supplies, largely explains the concentration of the industry in the northern part of the State.

The Illinois cement industry has shown almost no net growth over the past 20 years. In 1974 Illinois produced nearly 1.6 million tons of portland cement and accounted for a meager 2 percent of the US total; the three major producing states (California, Pennsylvania, and Texas) accounted for over 30 percent of the total. Illinois production of portland cement in 1974 was only 96 percent of its 1955 total. The state's share of total national output dropped from 3.5 percent in 1950 to about 2 percent in 1974. This can be attributed to a decline in the number of establishments over the past several decades. In 1966 there were 9 producing firms in the State compared with 4 in 1974. The highest production levels were reached in 1964 when more than 1.8 million tons of cement were produced. Cyclical fluctuations in the construction industry and shifts in the number of producing firms within the State have contributed to a drastic fluctuation of state output over time.

Illinois cement manufacturers have been somewhat shielded from the energy crunch of the past decade. All of the state's firms consume abundant southern Illinois coal as their primary energy input. In view of the scarcity and rising costs of other fossil fuels, many companies have begun to plan for the conversion to the exclusive use of coal. Thus, with coal more abundant, Illinois firms will probably command a competitive advantage over other producers.

Distribution services are provided by more than 250 ready-mix cement establishments scattered throughout the State more or less according to the distribution of population. Most of these establishments are small with 95 percent of them having 1 to 50 employees. In 1974 state employment in the ready-mix industry totaled over 5,800 workers.

The Carter Energy Proposals — Two Views

Since the start of the oil embargo late in 1973, three presidents of the United States have endeavored to put together an energy program that would (1) allow the nation to continue to grow but (2) avoid a severe wrench to the economy and (3) not leave the US at the mercy of foreign countries for much or most of its fuel. Very little of permanence came out of the Nixon and Ford programs. Their most noticeable and durable legacy seems to have been the nationwide lower speed limit. It is now President Carter's turn to try to hold down demand, foster production, and promote shifts from scarce sources of energy to more plentiful sources.

The President spent virtually the whole third week of April seeking support for the program he proposed to the Congress on 20 April. Since then, he and his assistant for energy affairs, Dr. James Schlesinger, have spent much time explaining the program and answering questions about it.

The Program in Brief

Conservation. Among the conservation measures proposed are taxes on cars with low gas mileage coupled with rebates on cars with high gas mileage, a standby additional and increasing tax on gasoline, tax incentives to insulate homes and businesses, mandatory efficiency standards for appliances, and a restructuring of electricity rates to avoid encouraging wasteful consumption.

In order to reduce US dependence on oil, especially imported oil, the President proposes to impose a graduated excise tax, beginning with 1978 models, on automobiles and light trucks that fail to meet government standards for mileage. Vehicles that produce mileage better than the standard would receive rebates. The 1978 standards would give rise to a maximum tax of $449 on cars giving less than 13 miles per gallon and a maximum rebate of $473 on cars with more than 39 miles per gallon. Levies/rebates would increase annually until 1985 when cars are expected to produce an overall average 27.5 miles per gallon. Both taxes and rebates would be paid to manufacturers and would be expected to be reflected in prices. The Internal Revenue Service would be charged with balancing rebates and levies each year.

The President also proposed to levy an additional 5 cents tax per gallon of gasoline beginning 15 January 1979 if consumption in 1978 exceeds targeted usage by 1 percent or more. The tax could rise in 5 cent increments to a maximum of 50 cents a gallon if successive targets are exceeded. The tax would be reduced if consumption decreased. To mitigate the tax's effect on the economy, money collected via the gasoline excise tax would be rebated via the income tax system and by direct payments to people who do not pay income taxes.

The Administration expects that Americans can reduce gasoline consumption 10 percent by 1985 without reducing miles driven by shifting to a considerable extent to smaller cars.

Proposals were also made regarding efficiency standards for trucks weighing 5 tons or less, removal of the excise tax on intercity buses, elimination of the existing excise tax preference given general aviation and motorboat fuel, and help to the states to make up for revenues lost as gasoline consumption declines.

Homeowners would be induced to undertake energy conservation measures until the end of 1984 by a tax credit of 25 percent of the first $800 spent and 15 percent of the next $1,400. Utilities would also be required to offer their customers insulation programs which could be paid for over a period of time as part of the customers' monthly utility bills. Businesses would receive a 10 percent tax credit in addition to the existing investment credit for approved conservation measures; and nonprofit schools and hospitals would be eligible for assistance grants for conservation measures. The 1985 goal would be insulation of 90 percent of all residences and other buildings.

In place of the current voluntary standards, the program would set mandatory efficiency standards for home appliances such as air conditioners, furnaces, refrigerators, and hot water heaters.

To foster conservation of electric energy, the program would require utilities to phase out promotional rates for electricity and to schedule off-peak rates and lower rates for interruptible service under specified conditions, and would prohibit master metering in new structures.

Also listed under conservation is cogeneration — the production of electric power and heat or process steam from the same facility. An additional 10 percent tax credit for the purchase of generating equipment was proposed to encourage industries to use otherwise wasted heat to produce electricity.

Oil and natural gas. The current price ceilings for previously discovered oil would be continued with escalation for the general rate of inflation. The price of newly discovered oil would be allowed to rise over a three-year period to the current world price (adjusted for inflation). Domestic crude oil would be subjected to a tax to equalize the controlled domestic price and the world price: imposition of the tax would occur in three phases so that by 1980 the tax would equal the difference between the domestic and world prices. Revenues generated by the tax would be returned to the public on a per capita basis via tax credits or direct payments.

The ceiling price for newly discovered natural gas would rise to $1.75 per thousand cubic feet on 1 January 1978; the present ceiling is $1.44. The ceiling would ap-

ply to gas sold within a state as well as to gas moving between states; at present intrastate gas is not subject to federal price controls.

In addition, in order to promote shifts from oil and gas to coal the Administration has proposed taxes on industries (beginning in 1979) and utilities (beginning in 1983) that use oil and natural gas and has proposed an additional 10 percent investment credit for expenditures for conversion to coal or other fuels. The later starting date for utilities recognized their greater difficulty in completely converting to coal. The use of oil or natural gas in new boilers, either by industry or utilities, would be prohibited.

Nuclear and solar power were also referred to in the program. Increased use of nuclear power is labeled "a last resort." Tax credits were proposed for solar installations: 40 percent of the first $1,000 and 25 percent of the next $6,400, up to a maximum of $2,000. The credit would be available from 20 April 1977 to 31 December 1984 and would decline over time. Businesses investing in solar equipment would receive an additional 10 percent tax credit.

The program speaks of the long-run hope that lies in such renewable sources as solar and geothermal energy and promises to promote aggressively the development of those sources.

The overall goals for 1985 are (1) to reduce the annual growth of US energy demand to less than 2 percent, (2) to cut oil imports to less than 6 million barrels a day (from the potential 16 million barrels), (3) to reduce gasoline consumption by 10 percent, (4) to insulate 90 percent of all residences and other buildings, (5) to increase coal output by at least 400 million tons a year, and (6) to use solar energy in more than 2.5 million homes. Toward those ends, the President proposed a program widely characterized in the press as a "carrot and stick" program.

Two Views

We present on the following pages two views of the proposals sent to Congress. The articles are in no sense a debate but are, rather, brief comments on a set of questions addressing some of the broad aspects and implications of the Administration's plan of action.

RUTH A. BIRDZELL

Get Government Out of Energy

A. JAMES HEINS, ***Professor of Economics, University of Illinois at Urbana-Champaign***

What is your general assessment of the President's energy program? President Carter's energy program reflects traditional liberal thinking in this country; if there is a problem, get government to solve it. And, in the process, create a new cog in the giant federal bureaucracy. A major aspect of the current energy problem is the shortage of natural gas. The seeds of that shortage were sown more than 20 years ago with federal regulation of the price of natural gas. Energy problems have been exacerbated in recent years by price freezes or threat of price freezes. In addition, oil companies have been threatened by excess profit taxes and dissolution. All of these aspects of federal policy have acted to increase energy problems by encouraging consumption and discouraging production.

The Carter plan proposes to continue the ridiculous price distinction between "new" and "old" oil. In the process it keeps the price of both below the world price, and equalizes the prices of domestic and foreign oil with a special tax. This continues the process of government price rigging; it can come to no better end than the price rigging of the past 25 years. Now is the time to solve the energy problem by getting the government out of the energy business instead of further in.

How will Illinois be affected by the program? States in which driving is popular — California, for example — will suffer under the gas tax proposal. They will send more tax money to Washington than they will receive back in rebates. The reverse will happen in states like Washington where driving is less popular. Michigan will suffer if the energy program results in reduced auto production. In the main, these effects should be average in Illinois. In the long run, however, Illinois may benefit if the pricing up of oil results in greater investment in the technology of reclaiming energy from high sulfur coal. The prime benefit here would flow to southern Illinois.

Will the program serve to increase unemployment? Yes, temporarily; any government program that drives up the price of a prime input in the production process to reduce consumption — and energy is a prime input — will depress the economy and increase unemployment for a while. The Arab oil boycott had that result four years ago; if Washington adopts a program that amounts to the same thing, the effect will similarly depress the economy. Of course, unemployment would not be worrisome in this case, because the government will have to hire those people to man the bureaucracy required to administer the program that put them out of work.

What is the likely impact of the program on inflation? The Arab oil boycott caused simultaneous inflation and unemployment in 1974 by raising the price of energy. If Carter's program were to cause a significant increase in the price of energy, the result should be the same as in 1974 — more inflation as well as unemployment. This problem results because government took actions to hold down the price of energy for 25 years, supposedly in the interest of consumers. Naturally, when you try to undo 25 years of mistakes in a short period of time major disruptions will occur.

How will the program affect economic growth? It is difficult to say what the effect of Carter's program on growth will be. What is economic growth? In the short run, inflation and unemployment will result. The long-run effect will be to change modes of production and the life style of consumers. Some of these changes are undoubtedly due. In fact, they are overdue and would have occurred years ago with wiser government policy then. The effect of the Carter program will be on the shape of economic growth, not its amount.

Which industries will benefit most from the program? If people spend less money on cars and gas, they will have more money to spend on other things. The industries that produce those other things will benefit. Of course, the world will beat a path to the door of any firm that develops more energy efficient methods of production, transportation, or heating. The Carter program places a greater premium on such developments, and the industries that respond will profit. And companies that produce home insulation could look for a boom in sales.

Which industries will suffer most? Certainly, any industry producing consumer goods that require major amounts of energy — autos and recreation — will suffer in the short run. When those industries suffer, workers and suppliers suffer as well as stockholders.

Do you feel that the uncertainty associated with controversy is adversely affecting business investment? Uncertainty of this kind is bound to affect investment adversely. A producer cannot make a wise decision on a new production process without knowing how expensive energy will be in the future. But alas, we probably cannot measure the amount of such an impact.

Do you really believe the adjustments asked for entail sacrifice? Or will they merely require a more efficient use of our resources? The United States economy is the most efficient in the world. There is precious little to be gained from improvement in efficiency anywhere. Yes, a major reduction in energy usage will entail sacrifice. The sacrifice involves a reduction in current living standards. What is offered in exchange under the Carter program is a more productive future. The reduction in current living standards is for sure; the more productive future is for maybe.

Do you approve of the goal to become independent of foreign oil? Certainly. But what is independence? As oil imports increase, people are wont to say that we are becoming more dependent on foreign oil. The reverse is true, of course, and fuzzy thinking prevails again. To assure our independence in oil, we should import 100 percent of our current consumption and cap our own wells. Government policies designed to restrict imports actually tend to increase our dependence on foreign oil by encouraging us to use our own. If the government would get out of the business altogether, private companies would find it in their interest to hoard our own expensive oil (cap the wells and store the oil in the ground) and import the cheaper oil from abroad. Therein lies energy independence.

One of the criticisms of President Carter's energy program is its emphasis on techniques to reduce demand. Do you feel that there should be incentives for production? Of course *not.* It would be silly to have policies to *decrease* consumption and *increase* production. The vice of increasing production in the United States is that we will be using our own oil rather than saving it. For instance, if consumption decreases and our own production increases, it must be that imports decline. This is precisely what we do not want. What we need is to get the government out of the business of trying to rig a solution and let the market do the job.

Do you favor the standby tax on gasoline? Do I approve of the tax? Or the fact that the tax is standby? I generally disapprove of taxes when the sole motive is the regulation of consumption. If we need better roads and the benefits of mass transit, then a gas tax is a reasonable way to finance those programs. In the Carter proposal, however, monies raised by the gas tax will be rebated. Thus, this tax is designed purely to reduce consumption. Regulation of consumption by taxes and subsidies constitutes the worst sort of infringement of our economic freedoms. What happened to the notion that the government should tax for revenue only? As to the standby part of the tax, the Congress should not give this much discretion to any president, even a peanut farmer.

Were you disappointed with President Carter's failure to include mass transit initiatives in the energy program? The biggest problem with financing mass transit is political. Federal finance of mass transit means a tax on everyone to provide benefits for city folks. That kind of legislation is difficult to enact. What is required is a way of harnessing the resources of metropolitan areas to provide the benefits of mass transit that go to those areas. President Carter has enough political problems with his energy proposal without taking on the problems of financing mass transit.

Comment on whatever aspect of the program you consider to be important which has not been covered in the foregoing. These questions do not reflect the understanding that our biggest fear from this and other federal programs is the increasing regulation of our daily lives. We focus too much on the likely outcomes of those programs and too little on the point that government programs designed to deal with problems — sometimes falsely perceived — erode our economic freedoms. Many problems with our economy — energy, welfare, inflation, whatever — can be directly traced to actions taken in Washington.

It is incredible to me that the American people look to Washington for solutions to the very same problems. We create a bureaucracy to solve a problem and other bureaucracies to solve the problems created by the first one.

If the Carter energy program were to become law, it would owe its political success to acres of misinformation held by the American public. People fear "vast profits" in oil, and they respond positively to politicians who call for watchdog government agencies designed to protect the interest of consumers. But the politicians are ripping off the public because those agencies only serve to advance the interests of the bureaucrats. The profits in oil are small potatoes when compared with the power of the federal bureaucracy.

The Economics of Energy with a Sense of Urgency

WALTER W. McMAHON, *Professor of Economics, University of Illinois at Urbana-Champaign*

A general assessment. The energy policy amounts in effect to production incentives that will use price effects to stimulate the production of solar energy, coal, geothermal energy, and nuclear power. It encourages substitution away from the ever increasing use of oil, partly by increasing its price through taxes, and seeks to conserve our dwindling reserves of oil, which the experts agree are running out.

As such it makes good economic sense. The program is consistent; all parts of the policy operate in the same direction, and not at cross-purposes, although these are not the only policies that would operate in that direction. We have been without a comprehensive policy for too long. The oil will run out, in the sense of there being an acute shortage, even if the Saudis more than double output within 10 years, according to the new 2½ year study *Energy: Global Prospects 1985* issued by 35 industrial, government, and academic petroleum economics specialists centered at MIT.

It is important that we develop alternative sources of energy before that time. It also seems reasonable that we should simultaneously conserve our domestic oil reserves, both proved and unproved, for uses later where substitutes for oil cannot be developed and for use in emergencies as this policy seeks to do. The details will be refined and modified, as they should be in a democracy. But the US has been hostage once to OPEC during the Arab boycott, that ever since has had a continuing inflationary impact on the economy that is not desirable to repeat. Last winter brought the first experiences with serious heat, light, and energy shortages. It is about time that something is done to conserve oil and to provide production incentives to develop alternative sources of energy. That is what this energy policy seeks to do.

How will Illinois be affected? Coal production in southern Illinois will be stimulated. Heating costs, especially of those who use natural gas and oil in the northern tier of counties, will increase. But residents of Illinois will experience even sharper increases in heating costs by 1987 if steps are not taken now to develop substitute sources of heat and energy. The program provides for partial subsidies for additional insulation which could significantly reduce the increase in heating costs.

The gas tax is likely to increase the cost of air travel and of big cars, but this and other effects are not unique to Illinois.

Will the program increase unemployment? No. Unless the extraordinary inflation of 1973–74 is repeated. That led to restrictive policies. More modest tax-price effects will reallocate employment to different industries and lead to some temporary frictional unemployment. The fact that the taxes proposed are to be spent or rebated means that some jobs will be destroyed but others will be created, neutralizing the net effect on employment. Employment will be increased, for example, as the result of tax credits for solar installations and for insulation of homes. As the proceeds of the gas tax are used to "help develop alternative modes of transportation, rapid or otherwise" as proposed by Transportation Secretary Adams and by Senator Cranston, employment will be stimulated in mass transit and railroads.

More important, if effects on unemployment are to be considered, this one energy policy cannot be considered in isolation. The economy is recovering, with a 6.75 percent growth in real gross national product in the first quarter of 1977; that is very close to the target 7 percent which most economists regard as desirable for a smooth recovery toward a sustainable long-run 4 percent full employment growth path. Other policies have been proposed by the Carter Administration and are being enacted as a portion of the new budget for fiscal 1979 that are part of the excess of federal expenditures over total tax receipts. The net effect of this planned fiscal policy will be to create more jobs, increase employment, and maintain the recovery. With a good recovery underway, the energy program will have relatively minor and largely frictional effects on employment.

Will the program aggravate inflation? Yes, to some extent, because it largely relies on price effects to achieve the desired reallocation. Prices of heating, transportation, and electric power are likely to rise, at least until substitute sources of energy and improved technology in their use are developed.

Prices tend to be inflexible downward for most other goods and services for which there is somewhat less effective demand, with the minor exception of some agricultural products. So as demand shifts and as oil, gasoline, and natural gas prices are increased permanently, the increased costs are passed on to all products eventually. The effect would not be as drastic as when OPEC raised the world price of oil manyfold to the current $14.50 per barrel. That is like a tax; but it goes to the Arabs.

Again, however, if effects on inflation are to be considered, this energy policy cannot be considered in isolation. The Administration has proposed an entire anti-inflation program only recently which contains a broad range of anti-inflation policies that can serve to dampen the effect. Furthermore, the inflationary impact of the energy policy in the short run will be less serious than continuing vulnerability to the potential inflationary impact of further increases in the world price of oil decreed by the OPEC cartel.

How will the program affect economic growth? An increasing shortage of cheap sources of energy acts to retard higher growth rates. The program per se will retard growth in some industries while stimulating growth in others.

Again, however, a broader set of fiscal policies, monetary policies, and policies designed to support research and development of cost-saving technologies are more relevant than the energy policy to the overall rate of economic growth. As indicated earlier, these policies, which are partly in place, seek to maintain a 7 percent real growth rate during recovery and to sustain thereafter

a 4 percent or 4.2 percent real growth rate after full employment is achieved. The energy policy has a modest significance in this broader context.

Which industries will benefit most? Heat pumps, solar heating equipment, coal, insulation, mass transit, makers of smaller cars, nuclear and coal-based electric power generating companies, bicycle makers, makers of "scrubbers" that reduce smokestack emissions, possibly railroads.

Which industries will suffer most? Makers of gas guzzlers (for example, the large car makers in Michigan, makers of large recreation vehicles), makers of large oil furnaces, utility companies that burn oil (for example, those throughout New York and New England), recreational air travel, and possibly long-haul trucking.

Is uncertainty adversely affecting investment? Not seriously, although uncertainty would of course cause investors in the most seriously affected industries to wait. As the congressional acceptance of the program becomes more specifically defined, investment in the adversely affected industries is likely to be retarded because of lower prospective rates of return. Investment will be stimulated in those industries likely to benefit.

Will the adjustments entail sacrifice? Some, but not any substantial amount unless smaller cars mean "sacrifice." Europeans have always used smaller cars and paid gasoline taxes that are much higher than those proposed. Yet the standard of living in northern Germany, Denmark, and Sweden is higher than in the US. People there are living very well. A more efficient use of oil and natural gas is not inconsistent with a high standard of living.

Do you approve of the goal to become independent of foreign oil? Yes, although becoming totally independent of foreign oil is hardly realistic. The problem is that we have become increasingly dependent on oil, sharply increasing our imports of oil since the OPEC boycott in 1973. This trend needs desperately to be reversed. A no-action policy by the US government has not reversed it in the past.

The Middle East is a very volatile area. The current involvement and potential involvement of the USSR with some of the Arab nations, when taken with the dependence of our economic stability on an uninterrupted lifeline of oil flowing from there, is very dangerous.

Do you feel that there should be incentives for production as well as techniques to reduce demand? The whole program is full of incentives to increase production of substitute forms of energy. Price incentives to this end are its main thrust. The real problem is to become more independent of all oil, domestic and foreign. Domestic oil and foreign oil are linked in various ways already. To let domestic prices drift free and follow this world price of oil, which is what some mean when they say "incentives for production," will exhaust our domestic oil reserves even faster.

There are, of course, incentives in the energy program for production of domestic oil and natural gas. The price of newly discovered oil is to be allowed to rise over a period of three years to the world price. Similarly, federal price ceilings would be lifted on newly discovered natural gas from $1.44 to $1.75 per thousand cubic feet, linked with the elimination of the $2 intrastate market within Texas and Louisiana that contributed to the critical gas shortages in Ohio and New England last winter. To go beyond these production incentives would involve large capital gains for oil and gas producers on their existing reserves, which they must be expected to continue to want and to argue for.

The simple fact remains, however, that the US should probably conserve its oil and natural gas reserves, in undiscovered form if necessary, and stress production incentives for substitutes. To let domestic prices drift free under total decontrol and follow the world market price would not only exhaust domestic natural resources faster, but be even more inflationary, and, as our reserves are exhausted, link the US inflation rate increasingly to the prices established by the OPEC cartel. Without substitute fuels in place, US stability and security will be increasingly linked to the oil industry and to the OPEC cartel.

Do you favor the standby tax on gasoline? Yes. A tax on gasoline is fundamental to the reduction of consumption by large cars, recreational vehicles, and trucks and at the same time to the conservation of our domestic oil reserves. A gas tax will encourage the shift to smaller cars, as it has in Europe. It will encourage some freight to move to the railroads, which are more energy efficient than trucks. It will provide some revenues to alleviate the burden on the lower-income groups through assistance, for example, to mass transit.

Were you disappointed with the failure of the Administration to include mass transit? Yes. The Congress and the Secretary of Transportation, however, are now getting together on amendments that designate mass transit as one of the recipients of funds from the gas tax.

Are there other important aspects? Yes. Other recreational vehicles should be covered by the big car tax, such as private planes, campers, large trucks, and large pleasure boats. Some of these burn as much as 30 gallons an hour. It would make the tax on cars, which many see as more of a necessity than these recreational vehicles, easier for car owners and the auto industry to bear.

Also little has been said in the energy plan about the railroads. They are more fuel-efficient than the huge trucks that have taken over the highways. There should be some public investment in improvement of the railroad right-of-ways, perhaps through the Army Corps of Engineers, the jobs programs, or through use of some of the proceeds of the gas and diesel fuel taxes. One by-product would be that everyone could drive more safely on the highways in their smaller cars.

Many have suggested that the conversion away from the use of gasoline, oil, and natural gas is not likely to be as large as envisioned by the White House. The policy, however, in this and other respects is a middle-of-the-road policy. The conservative right argues for complete decontrol, a policy that would be even more inflationary, not operate to conserve domestic production of a diminishing natural resource, and make oil prices even more dependent on the OPEC cartel. The left criticizes the absence from the program of mandatory controls (for example, a law against producing any cars or recreational

vehicles that cannot get at least 15 miles to the gallon), and for split-up of the domestic oil companies from their international holdings in OPEC countries. Although the current policy avoids these extremes, if the gas tax is too low or if the policy is not strong enough for other reasons to be sufficiently effective, there is likely to be a public outcry later for the more drastic policies of these types.

A three-day conference at the Brookings Institution has recently arrived at the conclusion that as a result of inaction there has been a massive increase in the use of foreign oil. These experts also conclude that we are running out of oil and are rapidly headed for disaster. Most of the opposition to getting some energy policy in place that has not been based on narrow self-interest has been based on a feeling of a lack of urgency. Now an energy policy is emerging, since there is a sense of urgency — a program that will continue to be refined for years to come. It is a plan for an orderly transition in a direction that is inevitable, but a plan that is likely to move the economy only part way. That inevitable direction is away from oil. It is toward production incentives for substitutes, such as solar, coal, geothermal, and nuclear forms of energy, toward substitutes for energy, and, at least in the short run, toward less waste and more conservation.

GNP: Potential, Performance, and Predictions

Economic activity has expanded rapidly so far this year. Even so, the performance of the economy is somewhat below earlier predictions and substantially below estimates of its potential. At the same time, the rate of inflation has been greater than predicted. Economic policy remains unchanged, notwithstanding reports of a tightening in monetary policy.

Potential Economic Growth

There is a view that the potential output of the economy grows year after year, without regard to its actual performance. This view is based on the idea that the economy's capacity to produce depends upon the growth of its labor force, the stock of productive facilities (plant and equipment), and the level of technology. Presumably, these factors change very slowly, and are typically growing. Hence we expect potential gross national product to grow slowly through time.

Even though we expect potential GNP to grow independently of current performance, it is plausible to believe that there is at least some "feedback" between performance and potential. To caricature the matter, it is unreasonable to suppose that during a 10-year depression potential GNP would simply rise willy-nilly.

The accompanying chart shows potential GNP rising at about a 3.5 percent annual rate during the period. The reader's eye will quite naturally be attracted to early 1973, when actual real GNP was higher than the estimates of potential GNP. This does not mean that the economy exceeded its ability to produce. Rather, it means that unemployment, which was 5 percent or lower for the entire year, was below its sustainable level — given the present composition of the labor force.

Thus, estimates of potential GNP are sensitive to assumptions regarding what constitutes "full" employment. Several decades ago, full employment was thought to mean unemployment of about 3 percent. More recently, economic policy aspirations have grown increasingly lax. Concern has grown about the inflation thought to be associated with low levels of unemployment. Also, the composition of the labor force may create a bias toward higher unemployment. There has been a marked increase in women and teenagers in the labor force. Typically, these segments experience higher unemployment.

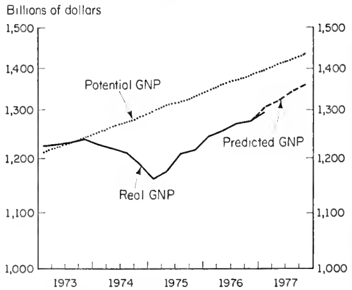
Performance

The economy has expanded rapidly for the past two years. Actual output has risen at just under a 6 percent annual rate since the first quarter of 1975, one and two-thirds the rate of increase in potential output. Even so, the pace of economic activity remains nearly 7 percent below its potential.

Such a state of affairs largely reflects the depth of the 1973–75 recession. From the final quarter of 1973 to the first quarter of 1975, real output fell 6.6 percent. During that same period, potential output rose 4.5 percent. As a result, by the trough of the recession actual output had fallen 10.7 percent below potential output.

Gross national product statistics for the recent first quarter have been revised upward. Real GNP rose at

Real GNP in 1972 Dollars



Source: Council of Economic Advisers.

a 6.4 percent rate from the final 1976 quarter to the initial quarter of this year. At this rate of growth, about two and one-half years would be required to bring the economy to its potential. Presumably, not until then would unemployment fall to 5 percent.

Measures of economic performance since the first quarter present a picture of strong growth. Industrial production continues to surge forward, expanding at a 9.6 percent rate through April. Although housing starts dipped sharply in April, these statistics tend to move erratically on a month-to-month basis. Housing starts are running more than one-third higher than a year ago.

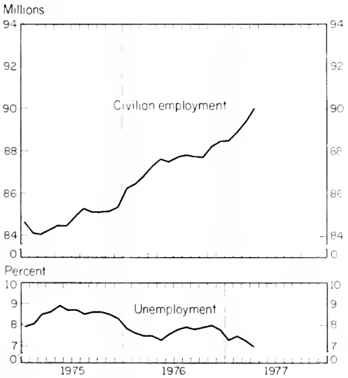
Employment has moved up, reflecting expansion in output. So far this year employment has risen at a 5.5 percent rate — as 1.6 million workers have been added to payrolls (see chart). Unemployment declined to 7 percent in mid-April, the lowest level in more than two years.

Consumer spending remains strong, as household confidence is buoyed by the improved job picture and expanding incomes. Retail sales in April remained near the record March level and 11 percent higher than in April 1976. The relatively strong April performance occurred despite a 4 percent decline in auto sales. Car sales rose more than 7 percent in early May, chiefly reflecting strength in sales of intermediate and full-sized models.

Business capital spending plans appear to be getting into the spirit of the economic expansion. The most recent McGraw-Hill survey indicates that business expenditures for plant and equipment will rise 18 percent this year. Price increases are expected to account for 7 percent of the rise, leaving a real year-to-year growth of 11 percent.

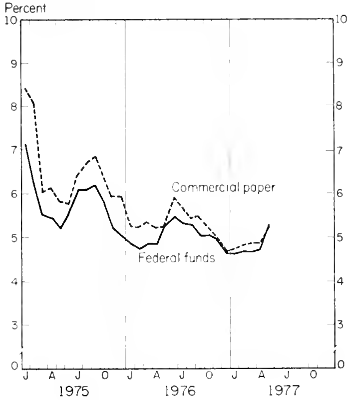
The rate of inflation continues to accelerate. Wholesale prices jumped at a 13.2 percent rate in April, and have risen at more than an 11 percent rate so far this year. Consumer prices rose at a 9.6 percent rate in April. They too have averaged a "double digit" rate of increase since the end of last year.

Employment and Unemployment



Source: US Department of Labor.

Interest Rates



Source: Federal Reserve Board.

There is a growing impression that monetary policy is tightening. This interpretation has been spurred by remarks of Chairman Burns. It is also fostered by a widespread confusion between interest rate movements and changes in monetary policy. Interest rates have jumped sharply since late April (see chart), and the prime rate was raised to 6.5 percent in mid-May. However, monetary growth has not tightened. Indeed, the pace of monetary expansion may have accelerated.

Predictions

Early this year, a "consensus" forecast regarding the 1977 performance of the economy called for a 5.5 percent year-over-year growth in real output, accompanied by a 5.5 percent rise in the price level.

The predicted time path shown on the chart is consistent with a 5.5 percent growth in 1977 (though it is but one of many possible paths). As the chart indicates, the economy is not expanding fast enough to meet earlier predictions. Moreover, given the first-quarter shortfall, to achieve 1977 forecasts GNP would need to rise well above the predicted levels as charted. Such rapid increases are unlikely. Even to reach the terminal level shown for the fourth quarter it would be necessary for GNP to maintain an average growth of 6.3 percent — a possibility, but not a strong likelihood.

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Current Economic Developments

Most analysts, like "the thundering herd" of Merrill Lynch, are bullish on America. The nation's factories are turning out a record volume of goods, housing is expanding at the fastest pace in several years, employment is reaching new highs, households are making near-record additions to their instalment debt and are maintaining their retail buying on incomes that are continuing to rise, and businesses seem a little more ready to spend on new capital and equipment.

Though rates of increase appear to be slowing in some areas, such declines may be salutary — some of the very sharp gains early this year were considered unsustainable. Less exuberant rates of increase are often regarded as surer for the long run and less likely to encourage further outbreaks of contagious inflation.

Substantial Growth in Production

The strong expansion in industrial output continues, with the gain in May amounting to more than 13 percent at an annual rate. Since February, when production started upward again after the reduction caused by January's foul weather, the FRB's index has shown an advance of more than 14 percent (annual rate). Virtually all industries are showing improvements. The most welcome increase has taken place in production of business equipment, up 22 percent at an annual rate in May following a hike of about 20 percent in April. Car production has slowed a bit from earlier levels, but output of other consumer durables has surged ahead. Household goods have been especially strong.

New housing starts are holding to their fast pace. A drop from March's 2.1 million units (seasonally adjusted annual rate) to 1.9 million in April was partly erased in May. The March level was the highest since August 1973. Single-family dwellings accounted for three-fourths of May's starts. There are some signs that one-family dwelling starts will begin to level off and multiunit structures will begin to increase. So far units for two or more families have not recovered to anything like the degree of single-family dwellings.

At least for the short run, economic factors seem to favor continuation of the housing boom. Household formation is expected to increase; the recent housing slump has left the supply far behind demand; mortgage rates are somewhat lower than they were during the credit crunch; mortgage money is readily available; and despite the rapid rise in prices, houses are still considered a good hedge against inflation.

Employment Still on the Way Up

By either of the two standards commonly used, the employment situation continues to show substantial improvement. The so-called household survey, which is used to measure overall employment and unemployment, indicated that an additional 385,000 workers found jobs in May, bringing the number of jobholders to a record 90.4 million. The unemployment rate, at 6.9 percent, dropped below 7 percent for the first time since December 1974.

The new high in the employment figure reflects an expansion of nearly 6.6 million jobholders since the recovery began in early 1975 and nearly 3.9 million over the previous peak.

Nonfarm payroll worker data, based on establishment reports, show that the private sector has provided most of the new jobs (chart, p. 2). Nearly 5 million workers have found jobs in private industry since the upturn began roughly two years ago. Just since the dip last October, nearly 1.9 million workers have been added to private nonagricultural payrolls. Construction and manufacturing, which lagged behind other sectors earlier in the recovery, have made especially welcome gains. In construction, the housing pickup has been a major factor in putting 250,000 construction workers back on the payrolls. In manufacturing, such industries as metal fabricating, machinery, and equipment have finally gathered momentum; and of course the continued (and somewhat surprisingly) strong showing of automobiles has also helped.

Government employment has been in the neighbor-

Deficits and the Economy *By William R. Bryan* / *Page 7*

hood of 15 million for over a year. Declines at the federal level have just about balanced modest increases in state and local government.

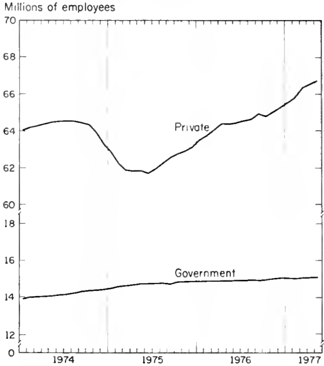
The growth in employment has not resulted in a corresponding cut in the number out of work. The chief reason is that increasing numbers are coming into the labor market. Nearly 400,000 people entered the civilian labor force in May alone, and 2.6 million in the past year. The civilian labor force participation rate (the percentage of civilian noninstitutional population working or looking for work) is up to 62.2 percent, a record. Much of the expansion has occurred among adult women. In the past year the participation rate of adult women has risen 1.5 points to 48.2 percent, representing an additional 1.6 million women in the labor force. In contrast, the participation rate of adult men has declined 0.3 point to 79.6 percent and the number in the labor force has grown by 847,000.

Retail Spending Rises at Slower Rate

Consumers have continued to increase their retail purchases, but the rate of gain has slowed. May retail sales of $60 billion represented an annual rate of advance of 8.4 percent. This was only about one-third of the very sharp increases seen in February and March, and probably indicates slight, if any, improvement in the real volume of sales. An important prop to recent sales has been a recovery in auto sales after a dip in April. A sizable share of that gain has been in imports, which seem to be benefiting from some buyers' pessimism about the future of gasoline prices. The annual rate of car sales in May reached 11.7 million units. Domestic sales held at about the 9.2 million rate that has prevailed for several months. In contrast, imports rose to a 2.5 million rate, a record nearly a third above the first-quarter rate. Other durables have also been picking up as consumers acquire appliances they had postponed purchasing during the recession.

A good part of the support for the increased buying comes from an expansion of consumer instalment debt. This is especially true of durables and car purchases. In April consumers added to their instalment credit outstanding at a near-record annual rate of $28 billion. Cars accounted for nearly half of that. In automobile

Nonfarm Payroll Employment



Source: US Department of Labor.

financing, there has been a shift from three-year maturities toward four-year loans.

A lesser degree of support comes from growth in personal income. The 7.2 percent annual rate of gain in May was somewhat smaller than the increase in April and was less than half of the January and February rates. The latest increase did take total personal income past the $1.5 trillion mark for the first time.

Capital Spending Planning Continues Wary

Market analysts have been watching the business sector of the economy for months, expecting investment in plant and equipment to increase in response to growing consumption expenditures and to reinforce the rising personal consumption sector. However, businesses continue to be exceedingly cautious in planning capital spending. The most recent report indicates projected expenditures in 1977 at $135.3 billion, 12.3 percent over those in 1976. Despite all the positive signs of recovery, that is only slightly more than the projected gain reported three months earlier. When adjustment is made for higher prices, the expected spending will produce a real addition of about 7.5 percent.

Manufacturing industries project a 14 percent advance — 16 percent for durables and 13 percent for nondurables. The car makers are planning a 50 percent jump in their capital spending. Other durables and machinery plan lesser increases. Iron and steel expect to spend somewhat less money, presumably in response to slow demand. Nonmanufacturing industries project an 11 percent increase in capital expenditures, including a 34 percent hike for airlines and substantial gains for utilities.

Various factors point to a little more vigor, or at

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least the prospect for a little more enthusiasm, in this sector. Capital appropriations — authorizations to spend money — are at a high level; businesses are spending more than they had projected earlier; some industries are beginning to show signs of strained capacity; and business in the aggregate is enjoying a high degree of liquidity. Furthermore, the President is expected to propose additional tax incentives for capital investment as part of his tax reform package later this year.

For now, the chief deterrents to capital spending are seen to be uncertainties of one sort or another — pollution regulations, the outcome of the energy proposals, the level of government spending, and inflation.

A Little Hope for Prices

Consumers and businesses alike would be helped by some letup in the rate of increase in prices. The latest reports offer some slight encouragement. Earlier this year, the wholesale price index rose at rates of 10 to 13 percent. In May the index rose at an annual rate of about 5 percent, the best showing since August 1976.

The fastest rate of advance — nearly 22 percent at an annual rate — showed up in foods and feeds. However, the farm product part of the index was off at an annual rate of about 28 percent, which may presage some future slackening in the increase of food/feed prices. Forecasts of large harvests this year in the United States and elsewhere — if the weather cooperates — are fueling hopes for additional moderation in food and feed prices.

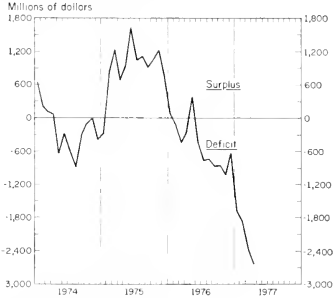
The farm and food/feed parts of the WPI are overshadowed by industrial commodities, which account for roughly two-thirds of the index. Industrial prices continue to rise but at a slower pace. In May such prices were up at an annual rate of 4.8 percent, two-thirds of the April rate and the smallest advance in five months.

The rate of increase in the consumer price index also slowed in May. An annual-rate rise of 7.2 percent was three-fourths of that in April. As they have been since the first of the year, food and fuel were the chief factors in higher prices. The year-to-year advance in the CPI was 6.7 percent, which was better than the earlier double-digit rates but still uncomfortably high.

Problems Beset Foreign Trade

However well the domestic economy is going, our foreign trade relations are not going well at all. Because the economy of the US has for many months been recovering at a faster pace than those of our trading partners, our imports have been increasing more rapidly than our exports. Consequently, our balance of merchandise trade has been in an almost-unbroken year-long plunge (see chart). In April the excess of imports over exports was more than $2.6 billion (equal to more than $31 billion a year). For the first four months of this year, the deficit totaled $8.55 billion, compared with one of $5.9 billion for all of 1976. A huge oil bill, running at an annual rate of $44 billion in April, is weighing very heavily in the import balance. Agricultural exports, which have done a good deal to bail us out at other times, have been much less vigorous lately.

Balance of Merchandise Trade



Source: US Department of Commerce.

The shortfall in merchandise trade is made up through the "invisibles" portion of the balance of payments — services such as shipping and insurance, banking services, and capital transactions. At present, however, these offsets are also lagging, so that the US balance of payments is expected to be substantially in deficit this year. As a result, the dollar is weak on foreign markets. That weakness has been the trigger for increasing concern abroad that the international exchange system may falter.

Nor is this all. Burgeoning imports of some goods — for example, color TVs from Japan and shoes from Taiwan — are causing a rising wave of protectionism in the United States. A private suit regarding imports of electronic goods has progressed in such a fashion that the council of GATT — an organization of most trading nations — has made a scarcely veiled threat of retaliation against US exports. There are growing fears that protectionist actions and retaliatory responses would lead to a general trade war and a breakdown of trade. The Administration is trying to head off such problems by negotiating voluntary agreements with our trading partners to limit their exports to the United States.

What of the Future?

A bevy of midyear forecasts for 1978 put growth in real gross national product in the range of 2.9 percent to 5.5 percent and the GNP price deflator (a measure of inflation) in the range of 5.0 percent to 7.0 percent. The median rates are 4.6 or 4.7 percent growth for GNP and 6.2 percent for the deflator. The best-known forecasters have forecast the following rates: for GNP growth — Wharton, 5.5 percent; Chase and Citibank, 4.8 percent; and for the deflator — Wharton, 6.3 percent; Chase, 6.2 percent; and Citibank, 5.5 percent.

RUTH A. BIRDZELL

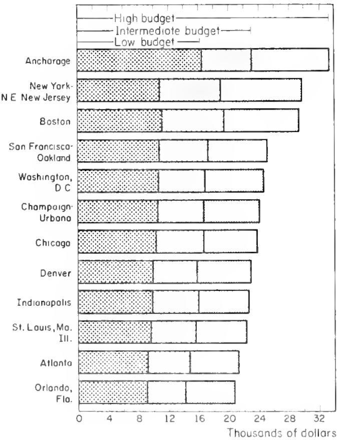
Local Illinois Developments

Family Budget Costs Rise

The cost of maintaining an urban family on an intermediate standard of living was $1,353 per month in 1976. To maintain a family of four cost $78 or 6 percent per month more than in 1975, compared with an $80 increase in the preceding year. The annual cost of this intermediate budget was $16,236.

The US Bureau of Labor Statistics also computes a lower and a higher budget for urban four-member families. (Such a family, as defined by BLS, includes a 38-year-old husband working full time, his nonworking wife, a boy of 13, and a girl of 8.) In 1976 the low budget costed out at $10,041, representing an increase of 4.7 percent over the preceding year. The high budget cost $23,759, a 6.6 percent rise between the autumn of 1975 and the autumn of 1976.

Estimated Annual Budgets, Urban Family of Four, Three Levels, Autumn 1976



Source: US Bureau of Labor Statistics.

Illinois Business Indexes

Item	Apr. 1977 (1967 =100)	Percentage change from Mar. 1977	Percentage change from Apr. 1976
Employment — manufacturing[1]	87.2[a]	+ 0.1	+ 1.6
Weekly earnings — manufacturing[1]	199.2[a]	+ 0.6	+11.1
Consumer prices in Chicago[2]	173.8	+ 0.8	+ 6.7
Life insurance sales (ordinary)[3]	245.5	− 4.6	+14.9
Retail sales[4]	215.2[b]	+ 22.7	+12.7
Farm prices[5]	206.0	+ 3.5	+ 3.0
Bank debits[6]	435.2[c]	− 0.9	+ 8.5
Building permits — residential[4]	158.3	+ 26.5	+54.6
Coal production[7]	99.3	− 7.4	+ 3.6
Petroleum production[8]	41.9	− 3.7	− 7.1

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Fed. Res. Bd.; [7] Ill. Dept. of Mines; [8] Ill. Geol. Survey.
[a] Preliminary. [b] Data for March 1977 compared with February 1977 and March 1976. [c] Seasonally adjusted.

Consumption costs rose approximately 5 percent in the lower budget, 6 percent in the intermediate, and nearly 7 percent in the higher budget. Food costs continued to rise but at a rate significantly less than in 1975. For the intermediate and higher budgets, food costs increased 0.8 percent; in 1975, food costs rose about 8 percent over 1974. However, because food constitutes a larger proportion of consumption at the low budget level, higher food costs had a greater effect on total consumption costs for those families. Housing costs rose 8.7 percent over the year at the intermediate and higher levels, primarily because of increased mortgage costs as well as rising heating costs.

Nonconsumption items such as social security and personal income taxes rose more sharply in the intermediate and higher budgets.

Budget costs for Chicago continue to be above the US average at all three levels — 0.2 percent at the higher level, 2.0 percent at the intermediate level, and 3.3 percent at the lower level (see chart). Champaign-Urbana also showed costs above the national level and marginally higher than in Chicago. Conversely, St. Louis showed a family budget figure below the national average at all three levels.

Additional information is contained in a report titled *Autumn 1976 Urban Family Budgets and Comparative Indexes for Selected Urban Areas* (US Bureau of Labor Statistics, 230 South Dearborn Street, Chicago, Illinois 60604).

Illinois Coal

Shortly after World War I, coal provided over 75 percent of total US energy requirements. Although oil and gas had surpassed coal as the nation's primary energy source by 1946, coal still accounts for a critical 18 percent of our total energy needs. More than 50 percent of our electricity generating capacity is derived from coal and 32 percent of the industrial sector's energy needs are satisfied by the mineral.

Moreover, coal commands an economically competitive advantage over other fossil fuels. According to the National Coal Association, coal costs 87 cents per million BTUs, compared with $2.04 for oil and $1.13 for gas. Additionally, oil and gas prices are rising faster than that of coal.

The US possesses an estimated 31 percent of the total coal reserves of the world — enough coal to last 200 to 400 years at present rates of use. Considering our prevailing energy dilemma, the current administration has called for a 65 percent increase in our production capabilities by 1985 and to restore coal as a primary energy source — especially in the generation of electricity.

Illinois will figure prominently in any discussion to bolster the development and use of coal for future energy needs. The State, with more than 160 billion tons, has greater total reserves of bituminous coal than any other state. Additionally, Illinois ranks second in currently economically recoverable reserves, with 65 billion tons, and its coal exhibits a high heating value (a hot burning coal) with more BTUs per ton than less potent subbituminous or lignite coal. The state's annual production — over 59.5 million tons in 1975 — accounts for 11 percent of the nation's total output.

Coal fields lie under approximately 65 percent of Illinois with the overall quality of coal mined (heating value and volatility) increasing toward the southern end of the State. More than 4.5 billion tons of coal have been mined in Illinois since 1833; this represents only about 5 percent of total reserves. The peak production level was reached in 1918 when 90 million tons were produced. In 1976 more than 14,700 coal miners were employed in the State and over 90,000 Illinois residents are directly affected by coal operations.

There are currently 23 underground mines and 32 strip mines operating in the State, with over 70 percent of the state's production originating from six contiguous counties stretched out over the southern part of the State from Belleville to Shawneetown. Smaller mines, located near Danville, Springfield, and Peoria, contribute most of the remainder. The largest producing county is Perry, which accounts for almost 20 percent of the state's total output. The leading counties in the employment of miners are Jefferson, Franklin, Perry, and St. Clair; together they employ 43 percent of total state mining personnel.

In 1974 Illinois consumed approximately 44 percent of its own coal production. Shipments into the State accounted for about 35 percent of total state coal consumption. Electric utilities account for about 79 percent of all coal consumed in Illinois; industrial use, 11 percent; coke and gas plants, 8 percent; and residential and commercial establishments, 2 percent.

Railroads are the predominant movers of coal throughout Illinois (65 percent of total coal moved). Nearly 78 percent of this rail traffic has the destination of an electric utility. River transportation of coal accounts for 23 percent of the state total, and trucks and the Great Lakes contribute 10 percent and 2 percent respectively.

Energy vs. the Environment

In spite of the availability of large quantities of coal and the accessibility to large coal-consuming markets, the development of Illinois coal is lagging. Over the past 10 years, Illinois coal production has shown virtually no growth while US production has increased at an annual rate of 2.1 percent.

The chief explanation for the slow growth of the coal industry in Illinois lies in the "dirty" burning characteristics of Illinois coal: it has a relatively high sulfur content. When it burns it produces sulfur fumes and soot which combine with elements in the atmosphere to produce a sulfuric acid mist. The Clean Air Act of 1970 limits the use of high sulfur coals unless expensive pollution abatement equipment is installed to remove the sulfur. Since enforcement of these environmental standards, low-sulfur coals (primarily from western states) have made deep inroads into the markets historically served by Illinois producers. Electric utilities, which are the principal market for Illinois coal, have shifted drastically to low-sulfur coals — Illinois utilities currently obtain approximately one-third of their coal from western suppliers.

Some utilities have been required to install "scrubbers" — costly antipollution devices attached to smokestacks to remove sulfur dioxide gas. It is estimated that such devices account for 10 percent or more of the cost of a new power plant. The industry argues that this cost is often prohibitive. The current administration has proposed mandatory scrubbers, regardless of the type of coal to be burned. This would probably offset the competitive edge western coal now enjoys.

Much research is being carried out to develop more efficient and economical means of removing sulfur from coal and flue gases. Once successful methods are fully developed, the demand for Illinois coal would probably increase substantially.

Strip mining and its environmental impact are also the subject of considerable controversy. Since 1962, Illinois has required the reclamation of strip-mined land and requires permits before coal is mined. This type of mining accounts for nearly half of Illinois coal production.

Comparative Economic Data for Selected Illinois Cities, April 1977

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Bank debits[4] (000,000)	Estimated work force unemployed[5] (percent)
ILLINOIS	$84,119[a]	3,164.1[a]	$43,735[a]	$2,342,261[a]	5.1[b]
Percentage change from Mar. 1977	−5.5	−4.6	+2.1	−0.9	
Percentage change from Apr. 1976	+15.2	n.a.	+9.6	+8.5	
NORTHERN ILLINOIS					
Chicago	$28,827	1,578.5	$34,073	$2,243,109[b] (Chicago, Aurora, Elgin, Joliet)	4.8[b] (Chicago, Aurora, Elgin, Joliet)
Percentage change from Mar. 1977	−26.1	−6.4	+3.6	−0.9	
Percentage change from Apr. 1976	−19.7	+1.0	+12.2	+8.2	
Aurora	$ 1,586	123.7	$ 412		
Percentage change from Mar. 1977	−42.6	−13.6	−16.8		
Percentage change from Apr. 1976	−15.7	−6.5	−9.3		
Elgin	$ 979	77.5	$ 454		
Percentage change from Mar. 1977	−57.1	−3.6	−11.5		
Percentage change from Apr. 1976	+0.1	−9.3	+12.7		
Joliet	$11,965	365.5	$ 301		
Percentage change from Mar. 1977	+368.4	+0.4	+8.7		
Percentage change from Apr. 1976	+651.5	+0.4	+41.3		
Kankakee	$ 555	63.8[c]	$ 211	n.a.	n.a.
Percentage change from Mar. 1977	+86.4	−8.6	+11.6		
Percentage change from Apr. 1976	+131.1	+8.9	−7.1		
Rock Island-Moline	$ 3,698	109.2[d]	$ 1,076	$ 22,134[b]	3.9[b]
Percentage change from Mar. 1977	+1.9	+1.8	−11.4	−5.3	
Percentage change from Apr. 1976	+113.7	+1.6	+21.9	+32.0	
Rockford	$ 6,179	141.6	$ 809	$ 11,541[b]	5.4[b]
Percentage change from Mar. 1977	+77.0	−8.2	+0.9	−2.2	
Percentage change from Apr. 1976	+158.0	+3.7	+4.8	+14.6	
CENTRAL ILLINOIS					
Bloomington-Normal	$ 5,530	42.8	$ 796	$ 8,575[b]	3.1[b]
Percentage change from Mar. 1977	−21.8	+5.7	−2.3	−3.7	
Percentage change from Apr. 1976	+33.5	n.a.	−4.1	+13.9	
Champaign-Urbana	$ 1,940	45.4	$ 677	$ 6,873[b]	3.3[b]
Percentage change from Mar. 1977	−63.8	−7.2	+5.9	+0.1	
Percentage change from Apr. 1976	−51.4	n.a.	+1.2	+9.8	
Danville	$ 805	38.8	$ 343	$ 3,045	n.a.
Percentage change from Mar. 1977	+89.3	−0.8	−5.8	+9.9	
Percentage change from Apr. 1976	+12.6	n.a.	−20.1	+17.0	
Decatur	$ 3,859	100.6	$ 428	$ 8,275[b]	6.1[b]
Percentage change from Mar. 1977	+6.0	+0.2	−8.2	+1.7	
Percentage change from Apr. 1976	−32.2	n.a.	+3.4	+13.1	
Galesburg	$ 1,872	28.4[c]	$ 144	n.a.	n.a.
Percentage change from Mar. 1977	+56.6	−3.1	−9.4		
Percentage change from Apr. 1976	+286.1	n.a.	+2.9		
Peoria	$ 5,601	172.4	$ 1,286	$ 18,380[b]	4.5[b]
Percentage change from Mar. 1977	−19.2	+3.2	−3.2	+1.1	
Percentage change from Apr. 1976	−1.1	−0.4	+7.5	+1.7	
Quincy	$ 1,340	37.0	$ 195	$ 3,453	n.a.
Percentage change from Mar. 1977	+307.1	+1.6	−3.0	+7.7	
Percentage change from Apr. 1976	+102.9	+12.1	+4.3	+27.1	
Springfield	$ 7,854	92.7	$ 1,749	$ 16,876[b]	5.3[b]
Percentage change from Mar. 1977	+22.4	−5.5	+1.1	−7.8	
Percentage change from Apr. 1976	+44.1	+7.5	+0.7	+25.6	
SOUTHERN ILLINOIS					
East St. Louis	$ 100	23.0	$ 161	n.a.	6.2[e] (East St. Louis, Alton, Belleville)
Percentage change from Mar. 1977	−15.6	−12.6	+1.3		
Percentage change from Apr. 1976	−42.5	+3.6	−3.6		
Alton	$ 168	76.4	$ 111	n.a.	
Percentage change from Mar. 1977	−89.8	+2.1	−0.9		
Percentage change from Apr. 1976	−71.0	+5.5	+0.9		
Belleville	$ 818	19.0	$ 266	n.a.	
Percentage change from Mar. 1977	−29.5	−14.0	+19.3		
Percentage change from Apr. 1976	+62.3	n.a.	+18.2		
Carbondale-Murphysboro	$ 443	27.8	$ 243	n.a.	n.a.
Percentage change from Mar. 1977	−33.3	−7.6	−11.0		
Percentage change from Apr. 1976	+75.3	+13.5	−41.0		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 22 April 1977. [4] Federal Reserve Board; seasonally adjusted. [5] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Madison and St. Clair counties. n.a. Not available.

Deficits and the Economy

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The large federal deficits of the past several years are generally regarded as undesirable. Such deficits are often cited as a chief cause of inflation and high interest rates. Indeed, a major goal of the Carter Administration is to achieve a balanced federal budget by 1980.

This article reviews developments regarding government deficits over the past two decades. One aspect of the review is a description of relationships among sector surpluses and deficits. Next, there is a consideration of possible causal relationships running from government deficits to inflation.

The Data

There is always equality between income and expenditures — during any period of time, one person's expenditure is someone else's receipt. Therefore, it is possible to view gross national product either as a flow of expenditures or as a flow of income receipts. However, as we look across an economy, the distribution of spending will differ markedly from the distribution of income. Some units in the economy — households, governments, or business firms — spend less than their income, thereby achieving surpluses; other units spend more than their income, thereby incurring deficits. But the sum of all surpluses necessarily just equals the sum of all deficits. Table 1 shows this identity relationship in some detail for last year, and Table 2 summarizes sector surpluses and deficits for the past 21 years.

Table 1. Sector Deficits and Surpluses, 1976
(Billions of dollars)

	Receipts	*Expenditures*	*Surplus or deficit*
Households	1181.8	1104.0	77.8
Businesses	198.6	241.2	−42.6
Government	591.1	635.5	−44.5
Foreign		−1.7	1 7
Statistical discrepancy			7.6

Source: US Department of Commerce.

As Table 1 shows, households spent substantially less than their income in 1976, achieving a $77.8 billion surplus. The household sector always runs a large surplus. Over the past 21 years (see Table 2) the household sector's surplus averaged 4.5 percent of gross national product — with a low of 3.2 percent in 1963 and a high of 5.5 percent in 1973.

By comparison, the business sector experienced a large deficit in 1976 — $42.6 billion. Indeed, the business sector ran a deficit in each of the past 21 years. The deficits averaged 3.8 percent of gross national product and varied markedly in size — from a low of 0.8 percent of GNP in 1975 to a high of 6.1 percent in 1973. Table 2 also shows year-to-year changes in the surplus and deficit positions of the sectors. In some respects it is more informative to investigate *changes* in flows than the flows themselves. The business sector is a case in point. As indicated, it is always in deficit — so what we are interested in is the direction of change.

The government sector — the federal government along with state and local governments — also incurred a large deficit in 1976, $44.5 billion. In the past 21 years the government sector experienced 14 deficits and 7 surpluses on an income and product account basis (see Table 2). From 1956 to 1974 the aggregate government deficit was $54 billion (an average yearly deficit of $2.8 billion). However, in the past two years alone the deficits summed to $108.9 billion.

According to Table 1, the US spent more abroad than foreigners spent here. That is, US net exports (exports minus imports) — along with other current transactions between the US and foreign nations — caused foreigners to acquire an additional $1.7 billion. These dollars were, therefore, available to lend in US credit markets.

Some of us are predisposed to place only minor emphasis on the role of foreign sector surpluses and deficits. However, an inspection of Table 2 casts a different light on the matter. In many years, US "success" in achieving large positive net exports cast the foreign sector in a substantial deficit position on current account. To finance their purchases in this country, foreigners need to acquire dollars. In other years, as in 1976, foreigners sold substantially more in the US than they purchased. In those years, they accumulated dollars, giving them the means to play a role in financing US investment or in accommodating a government deficit. Some analysts attribute a major share of the "statistical discrepancy" to the foreign sector. As Table 2 indicates, from time to time the discrepancy is very large.

Government and Business

As Chart 1 shows, government receipts and expenditures have expanded in each of the past 20 years. From 1956 to 1965 receipts rose at a 6.5 percent annual rate, and expenditures increased at a 7 percent rate. These growth rates were only slightly more rapid than the

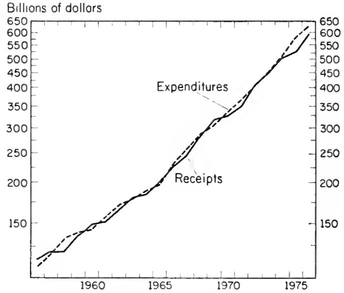
growth in gross national product. At the beginning of this period government expenditures accounted for 25.6 percent of GNP; at the end of the period they accounted for 28.9 percent. However, since 1965 government has expanded sharply. Receipts have risen at a 10.4 percent average annual rate, and expenditures have jumped upward at an 11.1 percent rate. By 1976 government expenditures accounted for 37.6 percent of GNP.

Government receipts fluctuate somewhat more on a year-to-year basis than expenditures. For the most part these changes reflect fluctuations in the rate of growth in dollar income — not new economic policy initiatives. With a progressive tax system, receipts tend to expand slowly during periods of recession. This can be seen from an inspection of the 1957–58, 1960–61, 1969–71, and 1974–75 periods displayed in Chart 1. With our tax system, tax receipts accelerate during periods of strongly expanding economic activity and/or in periods of strong inflation.

In contrast, business *expenditures* fluctuate markedly, whereas receipts move upward along a reasonably steady path (see Chart 2). What we refer to as business expenditures in this article are usually referred to as gross private domestic investment. These expenditures include investment in plant and equipment, changes in inventories, and spending on residential construction. What we call business receipts is usually referred to as business saving. It consists chiefly of depreciation allowances and retained earnings.

Business receipts demonstrate reasonably stable growth because in any given year a major component — depreciation — has little if anything to do with what is currently going on in the economy. In contrast, business expenditures vary widely from year to year. They tend to decline in periods of economic recession and to expand rapidly in periods of expansion. Marked declines occurred during the 1957–58, 1960–61, and 1973–75 recessions (see Chart 2). Businesses often allow their inventories to run down — a chief method of making rapid reductions in expenditures — using the proceeds to maintain their dividend payouts and, perhaps, their retained earnings. In periods of expanding economic activity, there are marked increases in spending on inventories, machinery, and other productive facilities.

Chart 1. Government Receipts and Expenditures



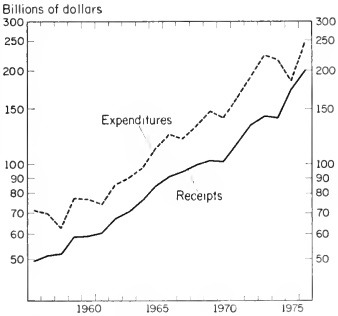
Source: US Department of Commerce.

Table 2. Sector Surpluses and Deficits, 1956–76[a]

Year	Household Surplus	Household Change	Business Deficit	Business Change	Government Surplus or deficit	Government Change	Foreign Surplus or deficit	Foreign Change	Discrepancy Surplus or deficit	Discrepancy Change
1956	19.9		22.3		5.2		−1.8		−0.8	
1957	20.6	0.7	18.1	4.2	0.9	−4.3	−3.6	−1.8	0.2	1.0
1958	21.7	1.1	10.6	7.5	−12.6	−13.5	−0.1	3.5	1.7	1.5
1959	18.8	−2.9	19.1	−8.5	−1.6	11.0	2.0	2.1	−0.2	−1.9
1960	17.1	−1.7	17.7	1.4	3.0	4.6	−1.7	−3.7	−0.7	−0.5
1961	20.2	3.1	14.5	3.2	−4.3	−7.3	−3.0	−1.3	1.6	2.3
1962	20.4	0.2	18.2	−3.7	−3.8	0.5	−2.4	0.6	4.0	2.4
1963	18.8	−1.6	20.1	−1.9	0.7	4.5	−3.2	−0.8	3.7	−0.3
1964	26.1	7.3	20.3	−0.2	−2.3	−3.0	−5.7	−2.5	2.2	−1.5
1965	30.3	4.2	27.4	−7.1	0.5	2.8	−4.3	1.4	0.9	−1.3
1966	33.0	2.7	33.3	−5.9	−1.3	−1.8	−1.6	2.7	3.2	2.3
1967	40.9	7.9	27.1	6.2	−14.2	−12.9	−1.2	0.4	1.7	−1.5
1968	38.1	−2.8	33.3	−6.2	−5.5	8.7	1.4	2.6	−0.6	−2.3
1969	35.1	−3.0	44.5	−11.2	10.7	16.2	2.0	0.6	−3.3	−2.7
1970	50.6	15 5	39.5	5.0	−9.4	−20.1	0.3	−1.7	−2.1	1.2
1971	57.3	6.7	44.4	−4.9	−18.3	−8.9	3.9	3.6	1.3	3.4
1972	49.4	−7.9	57.3	−12.9	−3.5	14.8	9.8	5.9	1.7	0.4
1973	72.7	23.3	79.4	−22.1	6.0	9.5	0.3	−9.5	0.4	−1.3
1974	72.2	−0.5	75.6	3.8	−4.2	−10.2	1.0	0.7	6.6	6.2
1975	84.0	11.8	12.1	63.5	−64.4	−60.2	−11.9	−12.9	4.4	−2.2
1976	77.8	−6.2	42.6	−30.5	−44.5	19.9	1.7	13.6	7.6	3.2

[a] Components may not add due to rounding.
Source: US Department of Commerce.

Chart 2. Business Sector Receipts and Expenditures



Source: US Department of Commerce.

Government and Business "Cooperation"

As indicated, surpluses plus deficits sum to zero. Thus, as the government sector moves toward surplus, the remaining sectors — households, businesses, and the foreign sector — must somehow generate an accommodating deficit. As government moves toward or into deficit, the remaining sectors must somehow move toward or into surplus.

It turns out that offsetting, or accommodating, roles are played by the government sector and the business sector. As with dancers, who, as one steps forward the other steps backward, so too, as the business sector moves toward deficit the government sector moves toward surplus. This relationship is shown in Chart 3.

Chart 3 is drawn so that an upward movement of the line implies a movement toward deficit for the government sector (whose scale is shown on the right) but a movement toward surplus for the business sector (whose scale is shown on the left). The congruence of the two lines is striking. However, that the two sectors "dance well with each other" is no accident. The economic factors that propel the business sector toward a greater deficit move the government sector toward a surplus — and conversely.

As businesses expand their investment expenditures, there is an accompanying deepening of the business sector's deficit. At the same time, as was indicated, such developments tend to be associated with strong expansions in economic activity. Indeed, there is a widely held view that expansions in economic activity are caused by rising investment expenditures. Whatever the direction of causation, it is clear that there is a strong association between changes in business investment and changes in economic activity.

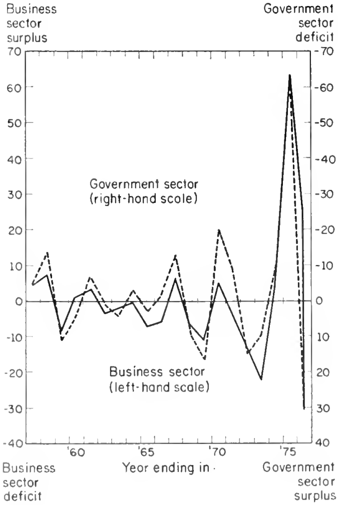
To complete the picture, as economic activity expands there is a concomitant rise in tax revenues. In turn, the government sector moves toward surplus.

According to this view of matters, the government sector plays a passive role. Given its expenditure plans (which cannot be substantially adjusted in the short run) and the tax structure (which is also controlled by Congress) changes in the government sector's deficit or surplus *reflect* developments in the economy. Such a view is in sharp contrast to the popular notion that an increase in the government deficit is a useful summary measure of the economic impact of federal fiscal initiatives. Let me highlight the word "popular"; of course, all well-trained economists understand these matters completely!

But this is only part of the picture. The "dancers" do not merely glide across and around the floor. There is always a modicum of exertion, and some economists report that, from time to time, there may be outright pushing and shoving. Thus, for example, even if the federal government may be moving *toward* surplus during an economic expansion, it may not be moving fast enough. If real economic activity cannot expand with adequate rapidity, inflation may accelerate to "feed" the household sector's dollar surplus and the government sector's tax receipts.

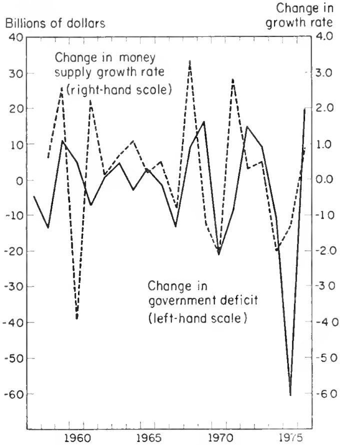
Also, upon occasion both government and business may move toward greater deficit. There is a view that

Chart 3. Changes in Sector Surpluses and Deficits
(Billions of dollars)



Source: US Department of Commerce.

Chart 4. Government Deficits and the Money Supply



Sources: US Department of Commerce and Federal Reserve Board.

government — because of its superior access to credit markets — may "crowd out" private investment. That is, government may force business to "dance" to its tune. Such coercion cannot be seen in the data shown in Table 2, even though it may be there. However, it might show itself in the form of higher interest rates and accelerated inflation. But these effects would not be visible to casual analysis.

Government Deficits and Inflation

There is a popular view that government deficits are inflationary, and contribute to high interest rates. Presumably, the corollary of this view is that deficits incurred by the business sector are benign. One explanation for this line of thought is that a federal deficit is likely to be "monetized" — that is, financed by an expansion in the money supply.

If this were the case, we would expect to find that money supply growth is positively related to changes in the government deficit. That is, as the government sector moves toward deficit, the growth in the money supply would accelerate. Conversely, as the government sector moves toward surplus, money supply growth would decline.

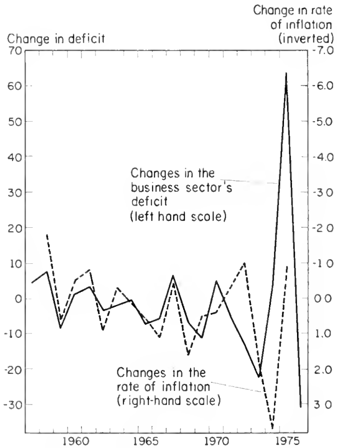
Chart 4 does not support this hypothesis. Instead, it suggests that the growth in the money supply tends to quicken as the government sector moves toward surplus, and to moderate as a deficit emerges. In light of the fact that government and business "dance together," an implication of this finding is that money supply increases are more closely related to deficits by the business sector. That is, business deficits are monetized — not federal deficits — even though the Federal Reserve consummates the act by purchasing federal debt.

The association between business sector deficits and money supply growth is rooted in an unhappy Federal Reserve operating tactic. On a short-run basis, the Fed tends to gear its operations toward movements in interest rates — especially the federal funds rate. Monetarists have bemoaned this for years, arguing that such an operating procedure tends to result in perverse behavior of the money supply. That is, money supply growth tends to accelerate in periods of economic expansion and rising interest rates, and to diminish in periods of economic weakness and falling interest rates.

In light of these considerations we might expect shifts in the rate of inflation to be closely related to changes in the business sector's deficit. In fact, this is the case. As Chart 5 indicates, during periods when the business sector's deficit was growing (shown on the left-hand scale) the rate of inflation quickened (shown inverted on the right-hand scale). Conversely, as the business sector has moved toward surplus there generally has been a diminution in the pace of inflation.

There were exceptions to these tendencies in the period studied. From 1970 to 1972, a period of sluggish economic growth, the rate of inflation diminished — even though there was growth in the business sector's

Chart 5. Business Deficits and Inflation



Source: US Department of Commerce.

deficit. In contrast, the rate of inflation quickened from 1973 to 1974 while the business sector moved toward surplus.

Conclusions

In no sense does this article purport to present a fully integrated discussion of the role of government deficits in the economy. Many strands of thought were purposely left dangling. For example, no distinction has been drawn between an "active" and a "passive" deficit — or between an actual deficit or a full employment deficit. The reader may wish to agonize over these omissions. Or he (she) may wish to write a well-balanced comment. In any event, enough has been said to raise serious question about several popularly held views.

One, where is the evidence that — in contrast to the behavior of the business sector — government tends to cover its deficits by printing money? The facts point to just the opposite conclusion. Namely, business deficits tend to be financed by "monetizing" debt. Government deficits are more nearly financed without accompanying increased growth in the money supply.

Two, where is the evidence that government deficits are inflationary while business deficits are not? The evidence presented here suggests a closer relationship between business deficits and inflation than between government deficits and inflation.

What does all this add up to — assuming that the evidence has been sensibly and fairly presented? Does it mean that the Carter Administration should fight inflation by designing measures to move the business sector toward surplus (meaning a larger government deficit)? No. At least, not on the basis of this argument.

Rather, it means that the widely held views have little basis in fact. Much of the talk about federal deficits as a *cause* of problems is simply nonsense. For the most part, a deficit is a *result,* not a cause. It is a result of a weak economy; it is a result of a burdensome tax structure; it is a result of wrongheaded monetary policy; it is a result of an oil embargo; it is a result of an energy shortage; it is a result of poor business planning; it is a result of ill-considered fiscal policy; and so forth.

It is a separate question, however, whether the size of or growth in government fosters an inflationary bias. This article does not — repeat, does not — deal with that issue. I do suggest, however, that the focus on deficits is badly misplaced and can be misleading.

Debt Increases

Debt rose 10.8 percent in 1976, reaching $3.4 trillion at the end of the year. In 1975 debt rose 8.4 percent. In contrast to most other years since the end of World War II, public debt rose more rapidly than private debt.

Net public debt, at $833.4 billion at the end of last year, was up 11.5 percent. This increase was slower than the 15.3 percent in the preceding year. The sharpest rise, 15.6 percent, occurred in the federal debt. State and local debt rose 6.1 percent in 1976 and the debt of federally sponsored credit agencies was up 3.2 percent. Notwithstanding these increases public debt constituted a little less than one-fourth of net debt in 1976. It accounted for nearly half of net debt in 1950, following the huge increases in the federal debt which occurred as a result of spending for the second World War.

Private debt rose 10.5 percent last year, compared with 6.3 percent the previous year. Corporations, which account for nearly three-fifths of private debt, about doubled the rate of increase in their indebtedness, from 5 percent in 1975 to 10 percent in 1976. Short-term debt rose more than long-term debt. Unincorporated business and farm debt was up 10.0 percent in 1976, consumer credit 10.4 percent, and mortgage debt 12.5 percent.

Multiple Jobholding

Nearly 4 million workers moonlighted in May 1976. Although the number of people holding two or more jobs simultaneously was slightly higher than in 1975, the rate, 4.5 percent of all employed people, was slightly lower. During the 1960s and early 1970s the moonlighting rate was usually above 5 percent.

The multiple jobholding rate for men, at 5.8 percent, was more than double the 2.6 percent rate for women. The highest moonlighting rate was among men of prime working age — 25 to 54. As in previous years, men whose primary employment was teaching (below the college level) had the highest rate of moonlighting. Among women, teachers and farm laborers had the highest moonlighting rates. Men found the largest percentages of their secondary jobs among professional, technical, and kindred occupations; as farmers or farm laborers; and as nonfarm managers or administrators. Among women, the largest percentages of secondary jobs were found in professional, technical, or kindred occupations; as clerical or kindred workers; and as service workers.

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Economy Stumbles Forward

Although business activity continues to move forward, its momentum appears to have been broken as the economy has begun to emit mixed signals. While industrial output continues to move up, home building has slowed. Employment has continued to expand, but unemployment has also moved higher. Despite a further rise in household income, consumer spending has stabilized. Although the rate of inflation appears to have moderated, interest rates have again begun to move higher.

Growth of monetary aggregates has slowed. While the narrowly defined money supply has continued to expand at about the same pace as over the past year, savings deposit growth has slowed. Even so, the banking system has continued to expand credit at a rapid rate.

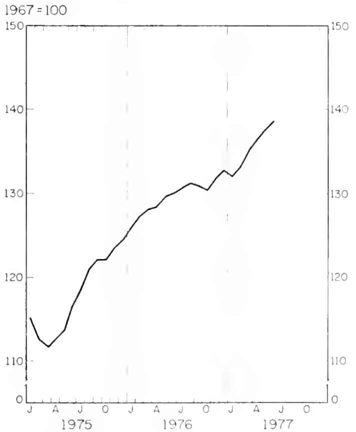
Output Increases

Real economic output rose at a 6.4 percent annual rate in the second quarter, not markedly different from the strong first-quarter increase. Output of the nation's mines, factories, and utilities expanded rapidly through the second quarter. Industrial production has risen at an 8.4 percent annual rate so far this year (see chart). In terms of industrial output growth, the current expansion is one of the strongest in the post-World War II period. Since the beginning of the recovery in early 1975, industrial output has grown at an average annual rate of 10.2 percent and has achieved a rate about 5 percent above its prerecession peak. This expansion has been exceeded by only one other recovery since 1949.

Recent increases in production have been led by an expansion in automobile output and by a rise in production of business equipment. In June there was a robust, 5.5 percent, increase in auto production, and output of business equipment rose 1.5 percent. Administration economists were especially pleased by the renewed strength in business equipment, as business investment is a key to the second-half performance of the economy.

Housing starts, another measure of physical activity, weakened at midyear. Even though starts are somewhat lower than in May and substantially below their March peak, it is possible that home building remains strong. Housing starts statistics are very difficult to interpret in that the series is extremely erratic. In any event, for 1977 housing forecasts to be achieved there must be marked increases during the remaining months of the year.

Industrial Production



Source: Federal Reserve Board.

Labor Market Mixed

Employment has risen steadily and rapidly in 1977. Since last December, the total number of people with jobs has expanded at a 5.2 percent annual rate (see chart). This increase is substantially more rapid than the 3.3 percent average rate of gain since the economic expansion began in March 1975. Employment growth in the current recovery has been more rapid than in any recovery since World War II.

Government economists predict a moderation in employment increases during the remainder of this year. This prediction rests chiefly on the historical observation that the rapid increases we have been experiencing are difficult to sustain for a period as long as a full year. However, there is no economic principle asserting that employment cannot rise rapidly for a prolonged period of time.

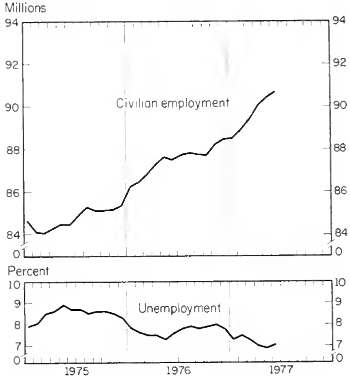
Unemployment, which has drifted irregularly downward for more than two years, has again blipped upward. By the time this article is in the reader's hands we shall know whether the June rise in unemployment — to 7.1 percent — was a one-month "quirk" in the statistics, or a potentially serious interruption in the movement toward reasonably full employment. There are difficult problems in seasonally adjusting the unemployment statistics, and these problems are especially sticky in June (as schools disgorge vacationing students onto the labor market) and September (as students return to school). In addition to seasonal problems, the labor force statistics are subject to changing "participation" rates. In particular, adult women have moved heavily into the labor market (see the July 1977 *Illinois Business Review*), continuing a trend of more than two decades.

Consumers Cautious

Household incomes have shown meaningful gains, reflecting both expanded employment and the effects of the recent tax cut. After adjusting for inflation, after-tax income rose at a 3.4 percent annual rate in June. The June increase began to show the impact of revised withholding schedules — to accommodate the increased standard deduction. After-tax real income has risen 3.3 percent over the past year.

Consumer spending has moderated in recent months, raising fears that the steam is running out of the household sector. Retail sales have declined at a 2 percent annual rate since March (see chart). Notwithstanding the three-month pause, retail sales in the second quarter averaged 2.1 percent higher than in the first quarter. In contrast, retail spending rose almost 12 percent in the preceding year.

Employment and Unemployment



Source: US Department of Labor.

Automobile sales in June were 14 percent greater than a year earlier. Sales in the first two-thirds of July registered only a 2.2 percent gain. The auto industry has begun moving into its annual model changeover period.

Corporate spending has not picked up the slack created by the consumer sector. However, recent surveys indicate that business spending is likely to rise in the second half of 1977. Appropriations by the nation's largest manufacturers in the first quarter exceeded those a year ago by nearly one-third. New orders for nondefense capital goods jumped 5 percent in June. Orders have been flat in the second quarter, but the pace is above the first quarter and substantially higher than last year. Machine tool orders are running more than 50 percent greater than in 1976.

Inflation Moderates

Wholesale prices experienced their steepest decline in nearly four years. The fall in the overall price index reflected a sharp drop in prices of farm products — the most pronounced decline in three years. Although prices of industrial products rose in June, the rate of increase was less than half that of recent months. Prices of crude materials actually declined. Such developments suggest that upward pressure on industrial prices may have moderated.

There is a presumption that price developments at the wholesale level are, in time, passed on to the retail

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level. However, recent developments at the wholesale level have not yet had a substantial impact on consumer prices. Although consumer price increases have backed off from the double-digit pace reached earlier this year, the rate of price increase so far in 1977 — at 9.2 percent — is nearly double the increase in the preceding year.

Financial Markets Tighten

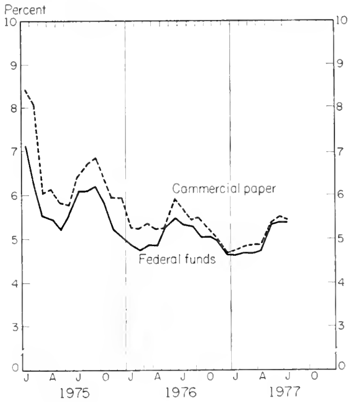
Interest rates have moved generally higher since the end of last year. Long-term interest rates rose from the end of last year to early spring, but have since stabilized. Short-term interest rates have moved upward in distinct steps — the most pronounced increase occurring in the period from April to May (see chart). During July, interest rates appear to have begun moving higher again.

The narrowly defined money supply (M_1) — demand deposits plus currency — has continued to expand over the past six months at about the same pace as over the preceding year. However, the growth of the broadly defined money supply — sometimes referred to as M_2 — has slowed markedly since early this year. With increased market interest rates and with interest rates paid on savings deposits and small denomination certificates of deposit at or close to their ceilings, these deposits have become less attractive to depositors. As a result, there has been a decline in the growth of time deposits available to ordinary savers. Since March, net time deposits (that is, time deposits other than certificates of deposit of $100,000 or more) have expanded at a 9.6 percent annual rate. In the preceding year, net time deposits rose nearly 15 percent.

To counter the slower growth in savings accounts, banks have stepped up their reliance on "purchased" funds. The banking system has experienced a $3 billion rise in large CDs since early May. In addition, member bank borrowing from Federal Reserve Banks has moved moderately higher. It is currently less costly for a bank to borrow from its Federal Reserve Bank than to borrow in the federal funds market.

Bank loans have risen rapidly since the fall of last year. Since last August, loans at commercial banks have expanded at more than a 12 percent annual rate. In the preceding year bank loans rose about 5 percent.

Interest Rates



Source: Federal Reserve Board.

Retail Sales

Source: US Department of Commerce.

Prospects

It is not unusual for economic activity to proceed in fits and starts. As suggested, economic developments are currently spotty — improvements in one area weighed against disappointments elsewhere. The media attempt to make as much as possible out of each statistic as it is released. Although such efforts create interest, it is really too early to identify any change in the trends that have dominated the past two and one-half years. We are left with the presumption that the economy will continue to expand into the near-term future.

The Council of Economic Advisers has predicted that real gross national product will expand 5 percent from the fourth quarter of 1977 to the fourth quarter of 1978. Such an increase would mean that economic activity next year would grow at about the same rate as this year. The forecast of the Congressional Budget Office is somewhat less optimistic — an increase of 3.6 percent to 5.1 percent.

These forecasts, which in some sense represent official positions of the Administration and the Congress, indicate that the rate of inflation will diminish somewhat next year. Unemployment is expected to decline moderately — to about 6 percent by the end of 1978.

WILLIAM R. BRYAN

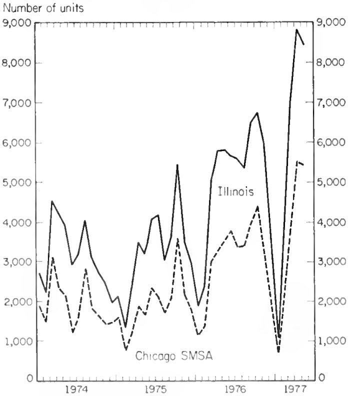
Local Illinois Developments

Housing Continues Recovery

Residential construction in Illinois, as measured by building permits authorized, continued to show signs of recovery (see chart). In the first five months of 1977 the total number of building permits issued in the State exceeded the number issued in the same five months of 1976 — 28,140 in 1977 compared with 21,030 in 1976, an increase of nearly 34 percent. After falling heavily in January because of the extremely cold weather, building permits rose to a new high in April of this year.

For the 12-month period from May 1976 to May 1977, the number of residential building permits authorized rose 40.9 percent in Illinois. Home construction in and around Chicago has been especially strong, as permits issued in the Chicago metropolitan area increased 47.5 percent; the increase for the rest of the State in this period was 30.8 percent. For the nation, authorized building permits rose 34.6 percent from May 1976 to May 1977. In the preceding 12-month period, residential building permits issued rose 46.8 percent, 44.5 percent, and 26.2 percent respectively in Chicago, the State, and the US.

Residential Building Permits Authorized
Illinois and Chicago SMSA



Source: US Department of Commerce.

Illinois Business Indexes

Item	May 1977 (1967 = 100)	Percentage change from Apr. 1977	Percentage change from May 1976
Employment — manufacturing[1]	87.6	+0.5	+ 2.6
Weekly earnings — manufacturing[1]	202.2	+1.5	+ 8.4
Consumer prices in Chicago[2]	174.4	+0.3	+ 6.5
Life insurance sales (ordinary)[3]	253.4	+3.2	+26.2
Retail sales[4]	224.8	+2.7	+10.1
Farm prices[5]	207.0	+2.0	+ 0.5
Bank debits[6]	458.5	+5.4	+18.6
Building permits — residential[4]	149.9	−5.3	+45.4
Coal production[7]	99.5	+0.3	+ 8.8
Petroleum production[8]	45.4	+3.1	+ 7.2

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Fed. Res. Bd.; [7] Ill. Dept. of Mines; [8] Ill. Geol. Survey.
[a] Preliminary. [b] Data for April 1977 compared with March 1977 and April 1976. [c] Seasonally adjusted.

Tax Statistics Available

In a recent supplement to the Statistics of Income series, the Internal Revenue Service has published income and tax data from individual income tax returns for 1972 for local areas. The number of returns, number of exemptions, and amounts of income and tax, classified by size of adjusted gross income, are presented for states, counties, and the 125 largest SMSAs, including Chicago, Rockford, Peoria, and St. Louis.

In 1972, Illinois taxpayers filed 4,362,622 returns with a total tax bill of $6,460,760. The following tabulation shows the percentage distribution of adjusted gross income and the total tax paid by income class for Illinois and the US.

	Adjusted gross income		Total tax	
	Ill.	*US*	*Ill.*	*US*
Under $5,000	6.7	8.4	1.8	2.4
$5,000 under $10,000	17.5	20.5	12.2	14.2
$10,000 under $15,000	24.5	25.3	19.9	21.4
$15,000 or more	51.3	45.8	66.1	62.0

This publication, *Supplemental Statistics of Income, 1972, Small Area Data, Individual Income Tax Returns* (Publication 1008), is available from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402. Price $5.75.

Nursing Homes in Illinois

Among other problems, our society is facing the critical dilemma of how to support and care for a growing number of aged individuals. Today, 1 in 10 people (over 23 million) in the US is 65 or older. This contrasts to the year 1900 when the figure was only 1 in 25. By the turn of the century, nearly 31 million people will be 65 or older (1 in 9) and in the three decades after that, their number will swell to almost 52 million (1 in 6).

Faced with an increasing need to serve our growing older population with its susceptibility to chronic illnesses and their geriatric implications, the nursing home industry has expanded sharply in the past two decades. "Nursing home" is a generic term covering a wide variety of institutions providing health care of various levels to people with problems requiring "skilled" or "nonskilled" facilities. Skilled nursing care establishments are primarily engaged in providing care and treatment for patients who require continuous health care but not hospital services. Such an establishment has an organized medical staff, including a physician (not necessarily in residence) and continuous nursing services. Nonskilled establishments provide some nursing and health-related personal care but not necessarily continuous nursing services.

Contrary to widespread belief, only about 5 percent of US citizens 65 years and older reside in nursing homes, but the number of patients has increased steadily over time. Seventy percent of nursing home residents are more than 70 years old, and the average age is 82 years. The average length of stay in a nursing institution is 2.4 years — only 20 percent of the patients ever return home. The vast majority of those entering will die in the nursing home.

At least 55 percent of those living in nursing homes are mentally impaired, 33 percent incontinent, and less than 50 percent are ambulatory. About 38 percent of nursing home residents lived in a private residence immediately before entering the home; another 35 percent were transferred from a general or short-stay hospital. The percentage of persons coming to nursing homes from mental hospitals or other long-term specialty hospitals is considerably larger among persons under 65 years of age than in the older age groups, although the differences in absolute numbers are not quite so dramatic. Hardening of the arteries is the most frequent primary diagnosis (23 percent) at last examination among residents of nursing homes followed by senility, stroke, and mental disorders.

Illinois licenses its nursing homes under three categories according to services offered: skilled, intermediate, and sheltered care facilities. There are currently 939 licensed homes in the State — 364 skilled, 400 intermediate, and 175 sheltered. For licensing and inspection purposes, these establishments are divided geographically by the Illinois Department of Public Health (IDPH) into nine nursing home districts. The three Chicago districts account for 50 percent of the state's licensed beds. The state's licensed capacity (number of beds) is almost 98,000 and the average nursing home can care for approximately 100 patients. About 80 percent of the homes are operated under private forms of ownership (475 corporations, 100 proprietorships, 97 partnerships, and 84 other). The remaining 20 percent of the homes are operated in the State by nonprofit organizations (including 79 church affiliated and 40 county homes).

Increasingly, state and federal programs pay for care in nursing homes. In 1976 nearly 50,000 Illinois nursing home patients (60 to 70 percent of the total patient population) were receiving medicaid payments from the Illinois Department of Public Aid (IDPA). The IDPA projects fiscal year 1977 costs at about $216 million — almost 25 percent of the total Illinois medicaid bill and a 125 percent increase over the past five years. In 1975, the total per patient monthly medicaid reimbursement averaged $475 for intermediate care facilities and $642 for skilled care facilities (the only two licensed classifications funded by medicaid). Medicaid pays only a portion of the total reimbursements which a facility received for any patient; the balance comes from the patient's private sources or other federal welfare programs such as medicare.

Reimbursements are made to nursing homes according to a "point count" devised by the IDPA. A social worker tallies points based on each patient's degree of sickness and health care needs. Monetary values are then assigned to the points and nursing homes are paid accordingly. Nursing home managers and industry critics have pointed out disincentives, deficient monetary reimbursements, and the assignment of points by persons with little medical education. The federal government has responded by demanding that home managers be paid according to costs of care. This cost-reimbursement plan is to go into effect in Illinois next year and is expected to add $40 million to the ever-growing medicaid bill.

The solution to the reimbursement problem seems to lie in whether trust can be placed in private enterprise to carry out our obligations to the aged — this will be difficult in light of general public distrust of the industry stemming from a high incidence of medicaid fraud and inadequate care given by some facilities. The State and the federal government are now paying for services provided by nursing homes for eligible welfare recipients at an overall cost of about $8,000 per person each year. Moreover, stricter safety regulations, escalating operating costs, and low reimbursement rates have placed private establishments in an unprofitable dilemma (even state officials have determined that the average daily payments have not matched daily costs to the provider of care). The State is now developing what could be an "arms-length, purchase of services, reimbursement system." The price for services would be set on the basis of costs of an average home giving good quality care, with the price of services being adjusted to obtain the quality of services deemed necessary by the public.

Comparative Economic Data for Selected Illinois Cities, May 1977

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Bank debits[4] (000,000)	Estimated work force unemployed[5] (percent)
ILLINOIS	$172,317[a]	3,126.1[a]	$41,750[a]	$2,467,629[a]	4.8[b]
Percentage change from Apr. 1977	*+109.7*	*−1.2*	*−4.5*	*+5.4*	
Percentage change from May 1976	*+240.2*	n.a.	*+5.0*	*+18.6*	
NORTHERN ILLINOIS					
Chicago	$120,031	1,555.6	$32,221	$2,366,668[b]	4.5[b]
Percentage change from Apr. 1977	*+316.4*	*−1.5*	*−5.4*	*+5.5*	
Percentage change from May 1976	*+573.9*	*+4.0*	*+6.5*	*+18.7*	
Aurora	$ 2,597	104.2	$ 507		
Percentage change from Apr. 1977	*+63.8*	*−15.8*	*+23.1*		
Percentage change from May 1976	*+88.3*	*−20.9*	*+11.2*		
Elgin	$ 2,560	74.8	$ 505		
Percentage change from Apr. 1977	*+161.4*	*−3.5*	*+11.2*		
Percentage change from May 1976	*+48.1*	*−15.0*	*+24.1*		
Joliet	$ 4,476	354.2	$ 287		
Percentage change from Apr. 1977	*−62.6*	*−3.1*	*−4.7*		
Percentage change from May 1976	*+131.6*	*+23.8*	*+36.0*		
Kankakee	$ 387	61.1[c]	$ 220	n.a.	7.3[b]
Percentage change from Apr. 1977	*−30.2*	*−4.2*	*+4.3*		
Percentage change from May 1976	*+91.0*	*+3.2*	*−3.1*		
Rock Island-Moline	$ 3,854	110.1[d]	$ 1,090	$ 23,230[b]	3.5[b]
Percentage change from Apr. 1977	*+4.2*	*+0.8*	*+1.3*	*+4.9*	
Percentage change from May 1976	*+85.3*	*+8.8*	*+17.5*	*+42.8*	
Rockford	$ 12,249	131.5	$ 778	$ 11,502[b]	5.1[b]
Percentage change from Apr. 1977	*+98.2*	*−7.1*	*−3.8*	*−0.3*	
Percentage change from May 1976	*+422.2*	*+22.6*	*−5.6*	*+17.8*	
CENTRAL ILLINOIS					
Bloomington-Normal	$ 4,232	43.5	$ 776	$ 8,562[b]	3.1[b]
Percentage change from Apr. 1977	*−23.5*	*+1.6*	*−2.5*	*−0.1*	
Percentage change from May 1976	*+72.1*	n.a.	*+4.2*	*+8.3*	
Champaign-Urbana	n.a.	48.2	$ 663	$ 7,530[b]	3.3[b]
Percentage change from Apr. 1977		*+6.2*	*−2.1*	*+9.6*	
Percentage change from May 1976		n.a.	*−2.8*	*+9.2*	
Danville	$ 781	39.0	$ 349	$ 2,787	6.4[e]
Percentage change from Apr. 1977	*−2.9*	*+0.5*	*+1.7*	*−8.5*	
Percentage change from May 1976	*+43.8*	n.a.	*−17.1*	*+7.0*	
Decatur	$ 3,095	98.8	$ 386	$ 8,942[b]	6.0[b]
Percentage change from Apr. 1977	*−19.8*	*−1.8*	*−9.8*	*+8.1*	
Percentage change from May 1976	*−31.3*	n.a.	*−13.7*	*+19.4*	
Galesburg	$ 1,831	26.1[c]	$ 150	n.a.	6.0[e]
Percentage change from Apr. 1977	*−2.2*	*−8.1*	*+4.2*		
Percentage change from May 1976	*+111.1*	n.a.	*−8.0*		
Peoria	$ 5,210	174.4	$ 1,237	$ 18,380[b]	4.3[b]
Percentage change from Apr. 1977	*−7.0*	*+1.2*	*−3.8*	*−0.0*	
Percentage change from May 1976	*−27.7*	*+2.1*	*+12.3*	*+10.8*	
Quincy	$ 1,628	34.9	$ 213	$ 3,050	6.5[e]
Percentage change from Apr. 1977	*+21.5*	*−5.7*	*+9.2*	*−11.7*	
Percentage change from May 1976	*+729.1*	*+8.7*	*−3.2*	*+15.0*	
Springfield	$ 6,382	115.8	$ 1,621	$ 16,978[b]	4.8[b]
Percentage change from Apr. 1977	*−18.7*	*+24.9*	*−7.3*	*+0.6*	
Percentage change from May 1976	*+101.6*	*+29.2*	*−5.4*	*+14.5*	
SOUTHERN ILLINOIS					
East St. Louis	$ 109	24.2	$ 150	n.a.	5.9[f]
Percentage change from Apr. 1977	*+8.7*	*+5.2*	*−6.8*		
Percentage change from May 1976	*+86.1*	*+4.3*	*−10.2*		
Alton	$ 314	78.5	$ 114	n.a.	
Percentage change from Apr. 1977	*+86.6*	*+2.7*	*+2.7*		
Percentage change from May 1976	*−86.9*	*+1.3*	*+3.6*		
Belleville	$ 1,192	22.1	$ 233	n.a.	
Percentage change from Apr. 1977	*+45.7*	*+16.3*	*−12.4*		
Percentage change from May 1976	*+33.6*	n.a.	*+7.9*		
Carbondale-Murphysboro	$ 1,389	29.4	$ 250	n.a.	6.3[e]
Percentage change from Apr. 1977	*+213.9*	*+5.8*	*+2.9*		
Percentage change from May 1976	*+55.5*	*+20.0*	*−34.7*		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 20 May 1977. [4] Federal Reserve Board; seasonally adjusted. [5] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Labor market area. [f] Madison and St. Clair counties. n.a. Not available.

Stock Market Activity

ROBERT W. MAYER, *Professor of Finance, UIUC*

In recent years the stock market has been the scene of several paradoxical developments. Explanations that satisfactorily reconcile them are not easy to find.

Most fundamental of these developments has been the continuing institutionalization of stock investment. Although individual investors (including personal trusts) continue to own about three-fourths of all outstanding corporate stock, for nearly 20 years they have not been adding to their holdings by net acquisitions. There are now more than four times as many individuals "in the market" as there were 25 years ago — about 25 million as compared with 6 million in 1952 — but their net acquisitions of stock have been negative in every quarter since the middle of 1958. That is, they have been taking more money out of the stock market than they have been putting into it — $12 billion more in 1969. It appears that instead of using stock as a means of investing their savings they have been using it as a vehicle of trading — and successfully too, at least as a group.

Furthermore, the statistics of trading volume and the general observation of brokers confirm the impression of individuals' active trading. Their general attitude is characterized by relatively short time horizons and by superficial indications of popularity rather than by concern for economic fundamentals. This is typified by the attitude of Marc Howard, "one of the most successful investors on Wall Street," according to *Time* magazine, which quotes him as saying, "I'm concerned more with the market's perception of a stock than with the validity of the stock itself. I can't afford to buy a stock because I think it's going to have great earnings in 1982. I buy on the basis of what other people are going to think of that stock in six months." This modern version of John Maynard Keynes's "parable of professional investment" may explain why individuals as a group have been taking more out of the market than they have been putting into it.

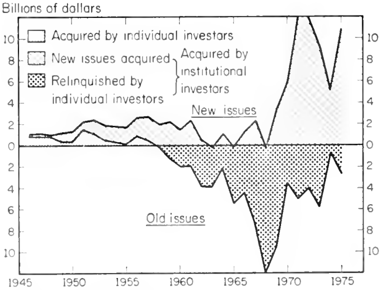
New Channels

Their savings are flowing into the stock market, instead, through the indirect channel of financial institutions: uninsured private pension funds (whose portfolios are mostly managed by the trust departments of large banks), insured private pension funds (mostly managed by large life insurance companies), state and local government pension funds, nonlife (that is, property-casualty) insurance companies, and, until the last five years, mutual funds. Fed by millions of small individual contributions, these institutions as a group have been acquiring stock in amounts not only equal to the entire amount of new issues each year but in addition, substantial amounts of old issues relinquished by individual investors. (See Chart 1.)

With the shift — from individuals to institutions — in the locus of much stock investment decision-making, it might be supposed that there would be more conservatism in stock selection and some slowdown in market activity. Traditionally, institutions were always bond investors or, to the limited extent that they acquired stock at all, high-grade income stock investors. The increase in the level and in the steepness of graduation of income tax rates during World War II, however, caused the preferential treatment of capital gains (and the complete exemption of unrealized appreciation) to give growth stocks a special attraction, and in the 1950s the mutual funds became full participants in the growth stock era.

But growth stocks were low-dividend payers, so the gain in growth was offset by decline of dividend income. In 1962 the Friend Report indicated that the overall performance (dividend income plus growth) of mutual funds — and of other institutional investors, too, for that matter — was not significantly better than that of the market as a whole as represented by random portfolios constructed without any managerial discretion at all. Stung by the implication that they were not earning their large salaries, portfolio managers turned to the only other means that seemed to be available to them to increase the performance of their portfolios: active trading. By 1965–66 the "Go-Go Era" was under way, and by 1969 the

Chart 1. Institutionalization of Stock Investment (Annual)



Source: Federal Reserve Board.

annual activity rates of institutional portfolios might almost be said to have skyrocketed (Chart 2).

The increased trading activity was successful in producing increased trading gains. But in considerable part these trading gains were achieved in volatile stocks, which pay meager dividends and whose price behavior includes little growth. So, perhaps not surprisingly, the Farrar Report of 1971 indicated that the overall performance (dividend income plus growth plus trading gains) was still about the same as that of the market as a whole as represented by random portfolios.

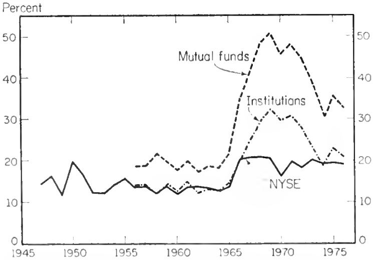
Incidentally, the inference drawn by some fund directors and investors that a portfolio manager has done nothing to earn his salary if his portfolio does not "outperform the market" is based on a misconstruction of probability theory. It assumes that a portfolio selected randomly (that is, without the discretionary service of a manager) will produce a return equal to that of the market as a whole. As a statistician would say, however, although the *average* return on a *group* of randomly selected portfolios would approach the return on the market as a whole, any *particular* random portfolio is likely to produce a return either less or greater than the market return. Or, as the layman would put it, a random portfolio *probably* would produce a return about equal to that on the market as a whole, but not *necessarily;* there is also the possibility — less likely, to be sure, but still a possibility — that any particular random portfolio might produce a return very much lower, or very much higher, than the market return. If the manager, by judicious exploitation of market imperfections, constructs a portfolio which is more likely than a random portfolio to produce the market return and less likely to produce a much smaller (or much larger) return, the beneficiaries of the portfolio may consider that he has done something worth a great deal to them.

To put the matter still another way, a random portfolio produces the average market return at the cost of bearing the average market risk. If the beneficiaries of a portfolio wish to be spared some of this risk their desire can be accommodated by a random portfolio only at the expense of a return lower than the market return — in accordance with the principle that risk and return are positively correlated in the market. Now if a manager is able, by exploiting market imperfections, to construct a nonrandom portfolio bearing less than the market risk but still producing the market return, he has indeed accomplished something which may be worth a great deal to the beneficiaries.

Trading activity of both individuals and institutions has declined somewhat during the 1970s, but it is still well above the level prior to the Go-Go Era. Also during the 1970s there has been a decline in the growth of mutual funds. Indeed, they have even suffered a net outflow of funds — by an excess of share redemptions over new share sales. (Some of the mutual fund "families" have tried to staunch this hemorrhage by establishing "money funds.") The cause of the heavy withdrawals from the mutual (stock) funds is not entirely clear, but popular disappointment with the performance of the funds — even though it may be unwarranted — probably is an important factor.

The Farrar Report also indicated that mutual funds were engaged in a number of speculative activities formerly supposed to be out-of-bounds for them. They were engaged in "temporary" borrowing on short term but with repeated rollover so that the debt had become almost as fixed in the financial plan as if it were a part of the capitalization. Other speculative activities included acquisition of nonnegotiable "letter stock," margin purchasing, short selling, trading in stock purchase warrants, and trading in — and even writing — call options. None of these is in violation of any provision of the Investment Company Act. But it had long been supposed that they would be eschewed by an institution which had been represented to the investing public as a "safe" means of putting the small investor's savings into stock. There even appears to be some indication that the increasing popularity of no-load mutual funds may be attributable to their attractiveness to individuals who wish to trade actively in fund shares, a practice which would be prohibitively costly in load fund shares.

Chart 2. Common Stock Activity Rates
(Annual)



Source: Securities and Exchange Commission, *Statistical Bulletin*.

Other Market Changes

Several other stock market changes have attracted a good deal of attention in recent years. Automation in the processing of orders has made it possible for brokerage houses to avoid repetition of their near scandalous inability to handle their volume of business in the latter days of the Go-Go Era. The introduction of the consolidated tape has prompted more rapid and complete dissemination of information on transactions not only in stocks listed on both New York and regional exchanges but also in many over-the-counter stocks. Phasing out of the traditional minimum commission system (completed 1 May 1975) has put commissions on a competitive basis, although it is still too early to assess the long-run effects on such things as the commissions paid by small noninstitutional traders and the fate of the small brokerage house. Incidentally, a good deal of the increased volume

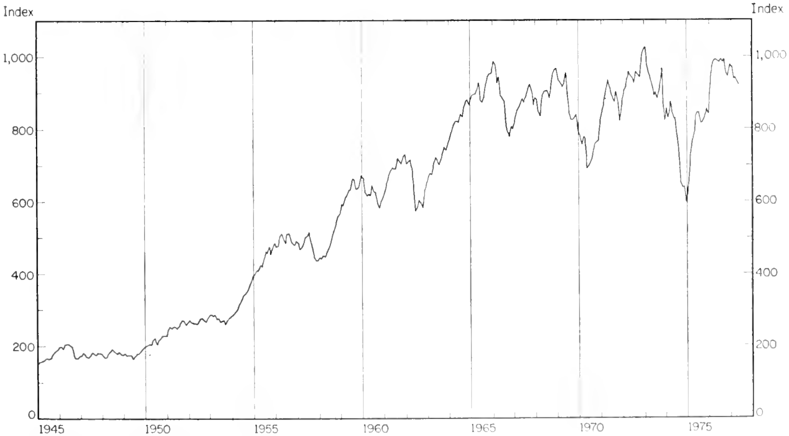
of reported exchange transactions in the last three or four years results from a return to the exchange of trading in the Third and Fourth Markets that developed before the minimum commission system was phased out.

There is also talk of a truly national market system in which not only the processing of orders and the dissemination of transactions information but also market-making itself would be streamlined, possibly even replacing the role of the specialist with some sort of computer program; but this has not yet gotten beyond the proposal stage. And it should be noted that all these measures are designed to facilitate trading rather than more fundamental investment decision-making. There still appears to be a strong popular impression that stock is unique in affording an effective hedge against general price inflation (despite recent research evidence to the contrary) and also a considerable degree of secondary liquidity. Still another striking feature of the 1970s has been the development of organized trading in call options on the Chicago Board Options Exchange, on the American Exchange (in New York), on the Philadelphia Exchange, on the Pacific Exchange, and on the Midwest Exchange. These markets accommodate organized trading in calls of three maturities on several score relatively well-known stocks, and it probably will not be long before they accommodate trading in put options as well.

It might be expected that all this emphasis on trading and other speculative activities in recent years would have produced a strong upward push in stock prices and perhaps wide fluctuations around the trend. As indicated in Chart 3, however, this has not been the case. (The Dow Jones Industrials are often criticized as being unrepresentative of the market as a whole, but the price movements here depicted are almost exactly paralleled by the more representative Standard & Poor 500 and the New York Stock Exchange Index.) The post-World War II upward trend petered out in 1965, the very beginning of the Go-Go Era, and since then the market has fluctuated around a level of about 850 within a range of ± 18 percent. For the past 16 months the range of fluctuation, around a level of about 950, has been only ± 5 percent.

Any particular observer's perception of the severity of fluctuations, of course, is largely a matter of his perspective. Popular commentators characterize the 1973–74 decline as a "crash." Anyone whose impression of the market is obtained solely from the Dow Jones Industrials chart in the *Wall Street Journal* probably thinks the market gyrates wildly from day to day. To the trader short-term fluctuations *are* significant; to the investor they are not. Portfolio managers — especially the managers of huge institutional portfolios — indignantly deny that they have become traders; the shortening of their time horizons, they insist, is the result of the increasing rapidity of economic change. It may be questioned, however, whether the changes which have brought about such an increase in portfolio activity are really fundamental or whether they attract each portfolio manager's attention only because he thinks they will attract other portfolio

Chart 3. Common Stock Prices, Dow Jones Industrials
(Monthly averages of daily closing prices)



Source: US Department of Commerce, *Survey of Current Business*.

managers' attention. In any case, the general trend of the stock market during the last decade has paralleled neither the real growth of the economy nor the course of inflation.

The Outlook

And what of the future? Some observers will feel reassurance that trading and other speculative activities seem not to have produced price instability. Profit-takers in a rising market and bargain-hunters in a falling market may keep stock price fluctuations within tolerable limits. Although stock price fluctuations are widely regarded as a "leading" indicator (leading, or preceding, a change in the economy) they are no more a cause of prosperity or depression than the barometer is a cause of good or bad weather.

Other observers (including this one) feel deeply concerned, however, about the pervasiveness of speculative attitudes. In the event of general price inflation or deflation, speculative behavior may get beyond society's control and inflict severe damage. Financial historians can point to many instances when feverish speculation was followed by financial collapse. But nobody listens to Cassandra. We might just as well sit back and watch the drama unfold — even if it should turn out to be a Greek tragedy. As Harry Truman used to say, "Maybe something will turn up" to save us from the consequences of our folly. If so, future historians will no doubt shake their heads as they reflect upon the way human nature demonstrated again in the 1970s that it is indeed an enigma.

Fiscal Crisis in Illinois: Its Doing and Undoing

A. JAMES HEINS, *Department of Economics and Institute of Government and Public Affairs, UIUC*

In this piece I try to explain the origins and resolution of the Illinois fiscal crisis of 1976–78. Before proceeding, however, I must note that the term "fiscal crisis" grossly misleads. It was not a crisis; and the problem was not fiscal. The problem was political and of less than crisis proportions.

The Problem and Its Resolution

The accompanying chart describes the problem. Between June 1974 and June 1977, the available balance in the state's general funds declined from $453 million to $52 million. The available balance is analogous to a checkbook balance; it is money in the bank. Bills can be paid only if the balance is positive. The balance declined because the State of Illinois spent more money than it took in during fiscal years 1975, 1976, and 1977 to the tune of $401 million. It had risen in earlier years because tax revenue exceeded expenditures. Since the checkbook balance must be positive (it should average at least $100 million if the state's bills are to be consistently paid on time), this downward trend had to be reversed; revenues would have to exceed expenditures in fiscal 1978.

The economics of the solution to the problem were simple. The State had to do one of two things in fiscal 1978. It could either (1) increase tax rates; or (2) restrict expenditure growth.

I say the economics of the problem were simple because the State had it well within its capacity to follow either route. Unlike a business firm that depends on customers not captive to its price and expenditure policies, the State has a captive clientele. It *can* raise taxes arbitrarily. Within limits, it *can* lower expenditures. No immediate economic "crisis" would result if the current cash shortfall in Illinois had been resolved by either route.

If there were a crisis, that crisis rested in the minds of the politicians whose political future depended on the making of the decision. A politician voting for a tax increase takes his political life in his hands. On the other hand, having to turn back the requests of state employees, welfare recipients, and educators makes no politician happy. This year the tax increase was the "big no-no," and the State is following the path of expenditure restriction in fiscal 1978. Lest the grammatic tenses fool the reader, I should point out that, as of this writing, we are more than one month into fiscal 1978, which began on 1 July 1977.

Origins of the Problem

The roots of the recent problem lay in economic and political forces at work in the 1960s. Growing pressure for the State to spend for education and welfare in the mid-1960s exhausted the resources that could be generated under the structure of taxes existing at that time. When the pressure was sufficient, Illinois adopted an income tax of major proportions in 1969. That tax not only paid the bills created by greatly increased spending by the State, it made possible a buildup in the state's cash balances. This buildup was reinforced by the unexpected revenue effect of inflation in 1974. The result is shown in the chart; the State of Illinois — I should say politicians in Illinois — found themselves with available cash of $453 million at the beginning of 1975.

Excess cash to a politician is a godsend. It is money that can be spent without having to be taxed; and it was

spent. In all fairness, I must point out that it should have been spent. The State has no business carrying around excess cash. It should turn that money back to taxpayers either by tax relief or by spending for useful purposes. After it was spent, it was gone and therein lay the difficulty.

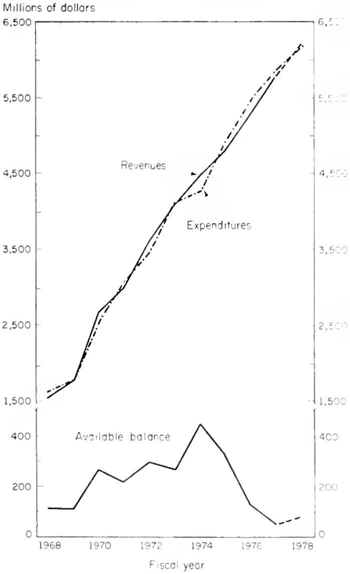
The problem with spending $400 million excess cash in three years lay in the resulting anticipation for more spending. Spending for government programs is akin to a hurtling locomotive — difficult to stop once it gets going.

Stopping a Hurtling Locomotive

In fiscal 1977 Illinois spent $78 million more out of its general funds than it took into those funds. In 1978 Illinois could not do that. That means that the first $74 million in increased revenue in 1978 could not be spent; that money was needed to repair the 1977 deficit.

Accordingly, the governor had to recommend that new tax revenues of $74 million be raised and not spent. He had to induce the legislature to go along or be prepared to veto some spending bills.

Revenues, Expenditures, and Balances



Source: Illinois Bureau of the Budget.

Put another way, Illinois increased its spending out of the general funds in each of fiscal 1975 and 1976 by more than $600 million. Those increases created momentum in state-financed programs. In 1977 spending growth slowed to about $350 million, but the momentum in state programs remained strong. State employees had already had raises postponed for some time, and that grace period had to end in 1978.

The political difficulties of having to tax without spending are apparent. In preparing the budget for fiscal 1978 those difficulties were compounded by pent-up demands for spending created by a greatly expanded program during 1975–77 and postponed pay raises. Fortunately, the landslide election of Governor Thompson in 1976 provided the political base needed to stop the hurtling locomotive. However, accomplishing that has undoubtedly cut into his political support. I presume he hopes that his support is sufficiently broad to withstand those political losses in the election ahead.

One aspect of the governor's approach deserves special mention. The State negotiated a contract with its employees' union that provided for a bare-bones raise, one consistent with the general tightness in the 1978 budget; but it also provided for a special raise contingent on the arrival of more tax revenues in 1978 than the governor predicted. The effect of that contract is to leave some of the 1975–77 momentum in a dormant stage. If unexpected revenues turn up in 1978, that money will be largely spent rather than being used to restore cash balances. The momentum in state programs would accordingly be restored.

Looking Ahead

Fiscal crises of the type described here are reasonably unpleasant episodes in the history of a state; and it is especially clear that politicians could do without them. What then to do?

The obvious answer is not to let large cash balances accumulate; but if they do, grant tax relief rather than spending those balances rapidly as was done in fiscal years 1975–77. However, that is not so easy, given the current institutions of state finance.

The institution mainly responsible for recurring crises of the recent type is the tax structure. By and large, state taxes are fixed as to rate; and rates are only rarely changed and then only in significant jumps. This problem does not arise at the local level where property tax rates are adjusted frequently and in small amounts.

For example, the governor predicted that the Illinois revenue structure would generate an increase of $360 million into the general funds in 1978 from state sources. This increase would occur without any change in tax rates, and purely because of increased economic activity. The institutions of state finance are such that that money will be used for some state purpose. It would not matter if only $300 million were actually spent. The remaining $60 million would find its way into the available balance to begin the next year. In all likelihood, it would be spent then. There is no easy way to grant $60 million in tax relief across the board. At the local level, the city council

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might accomplish equivalent minor tax relief simply by lowering the property tax rate from 9.762 mills to 9.648 mills. The property tax facilitates this approach to government finance; state taxes do not.

A Suggestion

But wait! Why do state taxes not facilitate minor adjustments to revenue? Apparently, the reason lay in the magic of round numbers. Who ever heard of a state sales tax rate of 4.765 percent? Or a flat income tax rate of 2.431 percent? The fact is that modern accounting methods and computers would make this approach to state taxes relatively simple. The benefits of this approach would be the undoing of fiscal crises of the 1976–78 brand.

On that basis, I suggest that Illinois move to a method of finance used by local levels of government. The legislature establishes the amount that the State must spend to meet its legitimate needs. After deducting other sources of money, federal grants and other state sources, the income (or sales) tax rate could be set so as to generate the required revenue. The formula for determining the income tax rate would be as follows: income tax rate = budgeted spending − federal sources − other state sources) ÷ estimated taxable income. The sales tax could be used in similar fashion simply by substituting estimated taxable sales for estimated taxable income.

Institution of this method of fixing tax rates has the potential to improve greatly the efficiency of state spending. Revenues would be raised only if spending is budgeted. Relatively minor tax relief could be accomplished yearly rather than waiting for cash balances to build up. Since the tax rate would have to be reestablished each year, spending would have to be justified each year — no more spending simply because current tax laws generate new money with no change in rates.

I note one special difficulty with using this method with sales or income taxes. Property values for tax purposes are essentially known; thus, a given property tax rate generates almost certain revenue. Estimated income and sales are just that — estimated. In any year the income or sales tax rate set by formula would generate either an excess or a shortfall in cash.

Although this difficulty exists, it is no greater than the difficulty that currently exists in state finance. Furthermore, any excess or shortfall can readily be remedied in the following year by resetting the tax rate. Under current procedures excess revenues result in piling up cash for subsequent expenditure. A shortfall, if persistent, may lead to a major tax increase.

In Illinois, a special constitutional problem exists with the relationship between the individual and corporate income tax rates. The corporate tax rate can be no higher than the individual rate by a factor of eight to five. This problem could be resolved with a modest complication of my proposed formula.

A monthly summary of business conditions for Illinois

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Personal Income in Illinois, 1975

Total personal income for Illinois residents in 1975 has been estimated at $75.7 billion, an increase of 8.1 percent from 1974. That gain represented a slowing in the rate of advance, from 8.8 percent in 1974 and 11.4 percent in 1973. It also showed that income growth in Illinois continued to lag somewhat behind growth in the nation as a whole. Recent increases in US personal income were 8.5 percent in 1975 (to $1,257.5 billion), 9.4 percent in 1974, and 12.2 percent in 1973.

The slower growth rate notwithstanding, per capita income in Illinois continued to exceed the national average by a large margin. Income of $6,792 per person in 1975 was 115 percent of the US figure of $5,903.

Illinois Compared with US

The smaller increases in the nation and in Illinois in 1975 reflected, of course, the sharp recession that began in 1974 and continued through much of 1975. The slowdown in manufacturing activity was especially obvious. In the United States the rate of gain in labor and proprietors income from manufacturing (by place of work) fell to about one-sixth of the 1974 growth rate and about one-eighth of the 1973 rate. In Illinois, income from manufacturing dropped slightly in absolute terms, whereas it had advanced by roughly a tenth in each of the two preceding years.

Manufacturing income declined in 43 Illinois counties between 1974 and 1975, including Cook County and several of the more important downstate manufacturing counties. Kankakee, Winnebago, Macon, Adams, and Madison all saw losses in income from manufacturing. However, Lake, Boone, Rock Island, McLean, Peoria, Tazewell, Champaign, and Will counties had increases. In Peoria and Champaign counties, the gains exceeded 10 percent. As might be expected, localities fared well or ill in the recession according to the composition of their manufacturing sector. Winnebago County, for example, has a large machine tool component, which has suffered from the general business reluctance to increase outlays on new equipment. On the other hand, the Peoria area produces earthmoving equipment (among other things) and Rock Island manufactures farm machinery; both these industries weathered the recession in good shape.

Another contrast between Illinois and the nation occurred in farm income. In the United States, labor and proprietors income originating in the farm sector dropped for the second year in a row, though the decline in 1975 was considerably smaller in percentage terms than the one in 1974. In Illinois, farm income fell in 1974 as it did nationally, but then rose very sharply in 1975. The 22.3 percent increase in income from farm sources more than offset the small decline in manufacturing. Farm income rose in 94 Illinois counties from 1974 to 1975.

In the US as a whole, amounts of income from most sectors continued to increase in 1975, as they had in the earlier 1970s. The only nonfarm sectors to show declines were contract construction and "other industries." In Illinois, aside from manufacturing, only "other industries" showed a decrease in 1975.

Also of interest is the greater importance of transfer payments, partly as a result of recession effects. In 1970 such payments were equal to 9.8 percent of personal income nationally and 8.3 percent in Illinois. In 1975 the figure was up to 13.8 percent for the US and to 11.8 percent for Illinois. In 1970 the lowest figure for any of the Illinois regions outlined in Chart 1 was 5.9 percent in Region II; the highest was 18.2 percent in Region XIV. In 1975 those percentages rose to 8.7 and 22.8.

The first of the accompanying tables (pages 4 and 5) shows total personal income for the State, the standard metropolitan statistical areas, and the 102 counties for the years 1970 to 1975. The second table (pages 6–8) presents for each county the breakdown of labor and proprietors income by major industries in 1975.

Per Capita Income

A more meaningful measure of economic well-being is offered by data on per capita personal income, which takes account of population changes.

In the US as a whole, per capita personal income rose 7.6 percent in 1975 to $5,903. In Illinois, the increase was a somewhat larger 8.3 percent to $6,792. This margin in favor of Illinois repeated the pattern of 1973 and 1974. To see whether real income actually rose, how-

ever, the gains must be matched with price increases. The following tabulation gives the comparison of US and Illinois per capita personal income advances and the increases in two price measures — the familiar consumer price index (CPI) and the more broadly based implicit price deflator (IPD) for the personal consumption expenditure portion of the gross national product.

Year	Increase in per capita personal income		Increase in price measures	
	US	*Ill.*	*CPI*	*IPD*
1970 to 1971	5.8%	6.6%	4.3%	4.4%
1971 to 1972	8.2	6.9	3.3	3.5
1972 to 1973	11.3	12.1	6.2	5.5
1973 to 1974	8.7	9.0	11.0	10.8
1974 to 1975	7.6	8.3	9.1	8.0

By either measure, income in the US and in Illinois failed to keep up with price increases in 1974. In 1975 income fell behind in the US by both measures, and either fell behind or barely kept pace in Illinois. Similar comparisons can be made for SMSAs and individual counties in the State by using the data in the third table (pages 9–11).

Taking into consideration the first three years of the decade when per capita incomes rose faster than prices (using the CPI), per capita personal income showed gains in nearly all of the Illinois counties from 1970 to 1975. McHenry and Will were the exceptions. The array of real increases for the five-year period was as follows:

Less than 10 percent	17 counties
10.0 — 19.9 percent	37
20.0 — 29.9 percent	19
30.0 — 39.9 percent	17
40.0 — 49.9 percent	8
50 percent or more	2

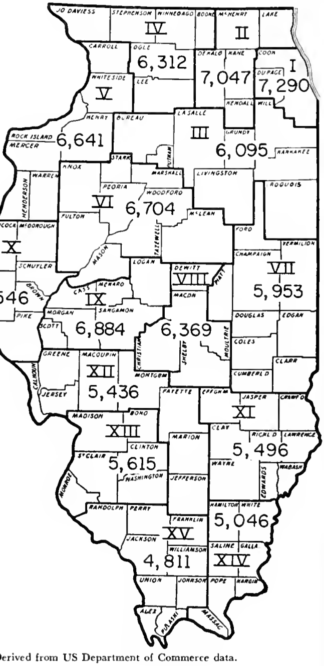
Ford and Hamilton were the two counties with the income gains of 50 percent or more.

Per Capita Income Relatives

In addition to examining changes in per capita personal income over time, it is possible to relate local levels to the US and Illinois averages. The third table shows the per capita income relatives for the State, the SMSAs, and the counties — that is, each area's per capita personal income as a percentage of the US average. The relatives for Illinois show a slight gain from 1970 to 1975. A tabulation of the county data shows that whereas 26 counties had per capita incomes equal to or greater than the national average in 1970, that figure had risen to 57 by 1975. Only 11 counties had per capita incomes of less than 80 percent of the US average in the later year, compared with 26 at the beginning of the five-year period.

The most notable exceptions to the state trend occurred in seven counties in the northeastern part of the State — Cook, Du Page, Kane, Kendall, Lake, McHenry, and Will — all of them urbanized and all except Will with per capita incomes substantially above the national average. Two other areas lost ground in the first half of the 1970s: Clinton and Madison counties in the Illinois portion of the St. Louis SMSA; and Johnson, Randolph, and Williamson counties in southern Illinois.

Chart 1. Per Capita Personal Income, 15 Regions, 1975



Source: Derived from US Department of Commerce data.

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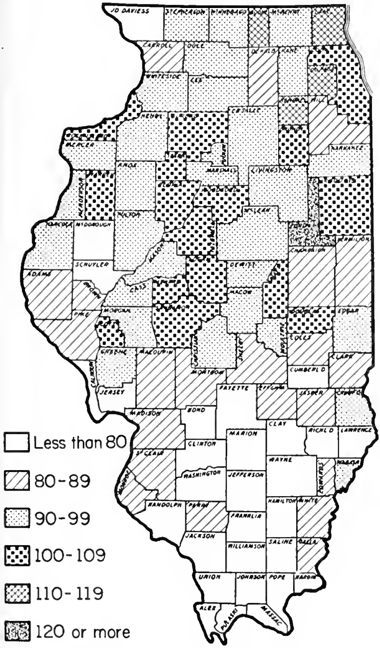
Chart 2. County Incomes as Percentage of State Average



Source: Derived from US Department of Commerce data.

In a comparison of 1970–75 changes in county per capita incomes relative to the Illinois averages, Carroll County in the northwest is added to the list of counties losing ground. Three other counties — Macon, Calhoun, and Hardin — just held their own. Chart 2 shows county incomes relative to the Illinois average. Counties having 1975 per capita incomes of less than 80 percent of the state average were concentrated in the southern portion of the State. Only two of the counties in Regions XI through XV had per capita incomes of at least 90 percent of the Illinois level. However, 17 of the 39 counties in those five regions improved their standing relative to the state average by at least 10 percent between 1970 and 1975, and 10 made gains of at least 20 percent.

By either comparison, Henderson, Mercer, Hancock, Stark, Logan, Ford, Douglas, Jasper, Greene, and Hamilton counties made the largest advances, 30 percent or more.

RUTH A. BIRDZELL

The Data

Each year the Bureau of Economic Analysis of the US Department of Commerce makes available to the University of Illinois Bureau of Economic and Business Research its estimates of personal income for the counties of the State. The reports give data for the second year before and data for several earlier years. Thus, the recently received 1977 reports include the income data for 1970 through 1975. The table on page 12 presents the report for one county.

The BEA bases its estimates primarily on administrative records of federal and state government programs, with additional information coming from various censuses or from nongovernment sources. The most important sources of administrative record information are the state unemployment insurance programs, the Social Security Administration insurance programs, and the Treasury Department's tax programs. Census data include surveys that are part of the Censuses of Agriculture and Population.

Personal income is defined as "the current income of residents of an area from all sources. It is measured after deduction of personal contributions to social security, government retirement, and other social insurance programs but before deduction of income and other personal taxes. It includes income received from business, Federal and State and local governments, households and institutions, and foreign governments. It consists of wages and salaries (in cash and in kind, including tips and bonuses as well as contractual compensation), various types of supplementary earnings termed other labor income (the largest item being employer contributions to private pension, health and welfare funds), the net incomes of owners of unincorporated businesses (farm and nonfarm with the latter including the incomes of independent professionals), net rental income, royalties, dividends, interest, and government and business transfer payments (consisting in general of disbursements to persons for which no services are rendered currently, such as unemployment benefits, social security payments, medicare benefits, retirement pay of governmental programs, and welfare and relief payments)."

The BEA also estimates employment for years and for an industry breakdown corresponding to those in the income reports. It also makes separate estimates of farm income, which list sources of income and detail the main categories of expenses.

These reports will be available from the Bureau of Economic and Business Research for the regions outlined in Chart 1. We have not yet received all of the reports for 1975; a future issue of the *Illinois Business Review* will report availability of the data sets and list charges.

Total Personal Income, Illinois, SMSAs, and Counties, 1970-75
(Millions of dollars)

SMSA or county	1970	1971	1972	1973	1974	1975
Illinois	50,148.9	53,772.7	57,736.4	64,312.3	70,000.2	75,702.5
Bloomington-Normal	407.9	458.6	495.0	582.9	647.8	720.7
Champaign-Urbana-Rantoul	574.8	647.5	689.6	785.5	842.4	913.8
Chicago	34,481.9	36,807.2	39,329.7	43,155.0	46,992.1	50,307.1
Davenport-Rock Island-Moline	1,503.6	1,592.5	1,749.7	2,024.5	2,274.5	2,469.6
Decatur	523.1	559.7	603.1	674.8	748.9	804.5
Kankakee	383.9	419.0	448.5	507.6	542.4	583.1
Peoria	1,483.0	1,616.2	1,722.2	1,972.1	2,224.2	2,467.8
Rockford	1,148.6	1,213.9	1,333.6	1,498.6	1,622.8	1,734.0
Springfield	768.6	847.2	910.4	1,012.2	1,118.1	1,247.1
St. Louis	10,313.3	10,932.0	11,564.9	12,540.3	13,533.0	14,649.8
Adams	268.6	288.9	317.5	364.2	379.4	410.0
Alexander	29.8	33.0	34.6	36.9	43.0	47.8
Bond	42.6	44.2	49.8	58.3	61.8	70.6
Boone	120.9	138.6	151.7	170.6	178.1	199.4
Brown	16.9	18.4	22.3	27.0	26.7	31.1
Bureau	143.3	157.5	167.6	206.7	225.7	252.3
Calhoun	16.6	17.0	18.1	21.4	20.9	24.2
Carroll	77.0	84.0	92.6	103.5	103.2	114.3
Cass	54.5	58.4	65.4	77.8	83.5	91.1
Champaign	574.8	647.5	689.6	785.5	842.4	913.8
Christian	136.7	150.7	167.1	202.1	220.5	243.4
Clark	53.8	55.5	65.4	74.6	79.6	89.3
Clay	39.9	41.8	49.9	56.3	61.7	68.6
Clinton	96.9	101.6	109.4	128.4	134.6	148.4
Coles	157.9	176.0	196.9	224.4	250.6	274.2
Cook	27,048.4	28,758.5	30,590.5	33,407.7	36,355.6	38,843.9
Crawford	67.4	73.3	81.6	95.5	109.3	121.3
Cumberland	25.0	28.1	35.1	41.3	43.9	49.5
De Kalb	268.5	285.6	313.8	353.3	391.7	421.6
De Witt	59.4	68.2	71.2	89.0	98.1	110.8
Douglas	69.7	79.5	90.4	108.1	117.4	135.3
Du Page	2,669.4	2,917.7	3,166.8	3,573.8	3,924.3	4,226.3
Edgar	76.5	84.7	96.2	111.7	117.1	130.0
Edwards	22.1	24.0	26.3	33.3	34.4	41.5
Effingham	78.1	87.9	103.8	121.0	135.4	157.1
Fayette	54.4	57.4	70.0	79.1	84.6	93.4
Ford	65.5	76.6	78.2	110.2	112.6	126.6
Franklin	114.6	120.3	135.3	149.9	163.1	185.3
Fulton	149.1	161.0	180.7	214.0	229.5	260.0
Gallatin	23.3	23.3	27.8	29.3	35.7	41.9
Greene	54.5	57.8	66.7	89.7	97.2	109.5
Grundy	115.6	129.3	127.5	153.1	169.7	187.9
Hamilton	20.7	21.9	24.5	31.9	35.7	41.3
Hancock	75.0	86.7	96.0	117.0	120.1	141.9
Hardin	12.8	13.5	15.3	15.4	17.5	19.8
Henderson	28.0	31.8	35.5	46.4	47.0	55.0
Henry	208.0	223.3	250.5	298.1	313.1	352.7
Iroquois	119.3	139.8	144.9	188.6	196.8	222.0
Jackson	162.8	181.3	198.2	220.3	234.7	265.5
Jasper	30.4	33.6	42.5	51.3	54.1	64.0
Jefferson	101.9	110.2	123.9	146.0	158.7	177.4
Jersey	59.9	63.0	67.5	79.8	86.1	96.3
Jo Daviess	73.5	77.6	87.0	99.0	101.9	113.6
Johnson	19.8	22.2	24.2	27.3	28.1	33.1
Kane	1,132.9	1,229.8	1,341.3	1,506.0	1,641.2	1,748.9
Kankakee	383.9	419.0	448.5	507.6	542.4	583.1
Kendall	137.0	144.3	161.9	189.7	217.6	232.7
Knox	239.8	260.7	286.4	328.6	352.9	381.1

Total Personal Income, Illinois, SMSAs, and Counties, 1970-75
(Millions of dollars)

SMSA or county	1970	1971	1972	1973	1974	1975
Lake	2,053.4	2,202.4	2,386.8	2,601.9	2,833.8	3,082.0
La Salle	446.6	466.4	496.2	570.0	629.5	692.9
Lawrence	53.8	54.7	63.7	76.0	86.7	89.1
Lee	132.8	144.8	162.7	189.1	203.3	227.1
Livingston	154.5	175.3	183.5	224.8	236.4	269.0
Logan	122.7	136.1	143.0	173.3	191.7	217.3
McDonough	100.5	111.6	122.3	147.6	157.0	176.9
McHenry	518.3	558.5	608.0	687.1	741.0	783.9
McLean	407.9	458.6	495.0	582.9	647.8	720.7
Macon	523.1	559.7	603.1	674.8	748.9	804.5
Macoupin	156.3	169.8	186.7	219.0	234.1	263.5
Madison	1,032.0	1,076.1	1,145.7	1,254.3	1,363.9	1,474.3
Marion	127.8	138.7	154.7	176.2	189.8	208.0
Marshall	47.3	52.6	56.2	69.1	75.9	87.7
Mason	65.1	70.4	73.9	91.6	102.1	116.6
Massac	39.1	42.0	45.4	50.1	56.0	65.5
Menard	38.6	44.3	48.5	60.1	64.4	73.4
Mercer	57.7	63.7	71.5	90.4	98.0	114.1
Monroe	70.1	77.0	82.5	91.5	93.7	104.5
Montgomery	105.0	116.1	127.2	149.1	160.1	182.3
Morgan	144.8	154.7	168.3	191.9	202.5	229.3
Moultrie	48.0	53.9	60.5	70.5	79.5	89.0
Ogle	170.7	187.5	202.7	238.5	243.3	264.9
Peoria	865.2	935.6	997.5	1,116.3	1,253.5	1,392.9
Perry	71.5	77.7	82.0	90.7	97.3	112.1
Piatt	65.5	74.6	71.5	91.1	98.7	114.5
Pike	66.1	69.1	78.4	97.8	93.3	106.2
Pope	8.7	9.3	9.8	10.3	13.1	15.2
Pulaski	20.6	22.4	23.4	24.8	30.3	33.4
Putnam	20.1	21.3	24.2	31.0	33.1	36.0
Randolph	110.3	120.0	128.8	143.8	150.7	168.0
Richland	49.0	51.9	65.0	78.5	88.0	91.1
Rock Island	698.3	736.7	800.8	916.5	1,038.5	1,122.3
St. Clair	1,011.6	1,093.5	1,171.1	1,271.5	1,371.9	1,520.3
Saline	79.7	86.1	93.4	107.6	117.5	133.8
Sangamon	730.0	802.9	861.9	952.2	1,053.7	1,173.7
Schuyler	25.4	28.7	33.3	41.2	36.7	42.3
Scott	23.1	24.8	27.9	34.5	36.1	43.1
Shelby	74.4	80.0	91.5	107.2	119.8	134.5
Stark	26.7	30.1	31.4	40.3	45.0	51.9
Stephenson	200.7	216.6	234.4	269.9	285.1	303.8
Tazewell	507.6	557.7	593.0	691.0	789.7	871.6
Union	51.2	54.1	59.8	71.6	74.9	82.3
Vermilion	353.9	391.2	420.1	495.9	525.8	577.8
Wabash	43.2	44.7	49.6	57.5	70.6	81.4
Warren	81.9	90.7	97.3	117.7	123.0	145.4
Washington	43.4	47.7	50.8	63.6	66.3	74.6
Wayne	49.7	55.4	55.1	68.4	71.8	82.3
White	53.5	55.8	61.2	71.4	83.2	93.4
Whiteside	247.8	263.8	294.6	344.7	373.7	412.7
Will	1,059.6	1,140.3	1,236.4	1,378.5	1,496.3	1,622.1
Williamson	158.9	171.8	182.5	203.5	218.2	240.7
Winnebago	1,027.7	1,075.3	1,181.9	1,328.1	1,444.7	1,534.6
Woodford	110.2	122.9	131.8	164.8	181.1	203.3

Source: US Department of Commerce, Bureau of Economic Analysis.

Total Labor and Proprietors Income by Place of Work, by Major Industry Source, by County, 1975
(Thousands of dollars)

County	Farm	Nonfarm									
		Private								Government	
		Manu-facturing	Mining	Contract construction	Wholesale and retail trade	Finance, insurance, and real estate	Trans., comm., and public utilities	Services	Other industries	Federal	State and local
Illinois	2,376,129	17,443,829	486,766	3,170,740	10,103,957	3,225,516	4,483,460	8,717,399	107,984	2,086,580	6,124,818
Adams	24,192	118,885	2,293	13,666	58,975	9,313	20,054	42,636	1,145	4,071	25,412
Alexander	2,517	8,419	(L)	1,492	6,716	(D)	3,866	3,139	(D)	853	4,576
Bond	6,120	5,956	(D)	999	6,905	800	2,142	7,630	(D)	553	3,792
Boone	10,327	141,301	(D)	7,861	10,368	2,240	6,485	8,299	(D)	849	9,120
Brown	9,005	263	(D)	1,465	(D)	609	800	(D)	(D)	510	1,651
Bureau	67,830	26,793	862	9,392	18,150	2,905	5,253	13,759	647	1,633	13,768
Calhoun	2,407	158	(D)	271	2,295	288	(D)	1,142	160	451	1,980
Carroll	25,711	6,191	291	1,327	8,871	1,947	8,669	4,767	581	10,089	5,926
Cass	20,028	17,194	(D)	1,816	7,746	1,248	6,067	3,300	(D)	884	4,709
Champaign	68,659	71,750	802	39,600	111,642	18,663	31,580	89,348	1,346	116,459	192,420
Christian	50,367	18,196	19,499	4,654	21,859	2,950	10,567	14,020	527	1,466	11,768
Clark	14,851	(D)	4,163	3,371	9,160	(D)	4,580	3,354	(D)	734	5,534
Clay	8,858	7,257	6,043	1,017	6,613	774	2,671	3,349	272	620	6,742
Clinton	13,900	7,815	1,941	4,465	13,051	1,772	6,869	10,007	521	1,564	17,427
Coles	37,023	52,665	1,742	13,091	28,537	4,837	19,479	19,069	609	1,966	34,496
Cook	9,109	9,811,198	52,751	1,624,496	6,342,026	2,357,116	2,878,042	5,661,357	32,309	983,342	3,206,132
Crawford	12,054	36,038	5,630	8,512	11,885	(D)	5,511	6,043	(D)	792	6,304
Cumberland	11,879	2,509	(D)	232	3,992	402	856	2,243	(D)	313	2,991
De Kalb	52,199	80,581	(D)	(D)	40,760	6,840	8,583	18,592	(D)	2,834	64,066
De Witt	27,717	9,611	(D)	1,887	10,555	1,593	7,056	4,669	(D)	678	5,439
Douglas	35,747	21,547	10,679	7,318	12,325	1,684	7,104	5,084	(L)	905	7,081
Du Page	6,369	511,772	(D)	205,292	513,344	107,957	136,662	485,569	(D)	30,930	204,720
Edgar	30,897	19,718	406	2,158	11,866	1,656	3,662	6,480	559	926	6,825
Edwards	6,312	10,108	974	660	2,956	385	1,702	1,754	253	393	2,147
Effingham	18,089	37,368	1,003	8,096	23,466	3,703	9,721	14,466	562	2,037	9,806
Fayette	12,898	9,973	(D)	2,393	9,815	1,400	3,014	5,365	(D)	1,517	10,595
Ford	28,912	12,131	(D)	2,383	11,151	1,706	3,932	5,157	(D)	1,587	6,558
Franklin	5,517	4,763	28,827	5,333	15,350	2,187	7,356	11,762	203	1,694	14,436
Fulton	29,417	41,747	26,845	2,555	18,759	3,484	5,864	14,603	772	1,483	15,628
Gallatin	10,039	2,107	14,165	598	3,375	239	(D)	1,000	(D)	236	2,427
Greene	41,980	3,629	(D)	981	6,908	1,016	4,849	3,351	(D)	971	5,650
Grundy	18,598	37,141	(D)	(D)	17,491	2,507	18,743	(D)	(D)	1,116	9,636
Hamilton	7,923	1,315	1,220	423	2,353	441	1,108	1,370	237	657	4,413
Hancock	36,660	10,769	(D)	4,225	9,267	1,426	3,884	8,021	(D)	928	8,089
Harden	-61	174	5,801	309	(D)	156	919	(D)	79	349	1,693
Henderson	22,198	(D)	(D)	(D)	2,231	518	740	940	88	355	2,365

Total Labor and Proprietors Income by Place of Work, by Major Industry Source, by County, 1975
(Thousands of dollars)

County	Farm	Nonfarm									
		Private								Government	
		Manu- facturing	Mining	Contract Construction	Wholesale and retail trade	Finance, insurance, and real estate	Trans., comm., and public utilities	Services	Other industries	Federal	State and local
Henry	56,491	41,480	(D)	14,621	29,882	5,114	11,263	16,333	(D)	2,440	17,707
Iroquois	66,917	18,557	(D)	4,050	17,739	2,894	3,237	(D)	(D)	1,622	10,564
Jackson	5,728	14,906	5,046	12,171	28,502	5,784	13,042	26,365	494	5,222	96,189
Jasper	17,441	4,358	(D)	6,260	6,170	743	1,400	1,683	(D)	732	3,432
Jefferson	6,353	16,097	34,718	8,065	20,985	5,621	10,352	18,244	661	2,697	13,168
Jersey	13,195	3,705	(L)	(D)	9,218	908	2,784	6,050	(D)	677	7,755
Jo Daviess	18,112	13,230	156	2,877	9,114	1,634	2,343	4,329	520	821	6,218
Johnson	830	862	900	685	3,296	(D)	1,086	1,049	(D)	678	3,872
Kane	18,406	444,635	(D)	61,295	195,629	44,876	53,889	174,478	(D)	34,999	153,035
Kankakee	25,993	145,802	1,027	24,629	59,707	9,032	22,854	52,013	1,580	4,995	86,008
Kendall	22,969	149,383	(D)	3,379	10,356	(D)	3,037	7,068	689	813	9,016
Knox	35,115	103,288	4,564	13,763	42,607	7,576	28,487	31,805	878	3,681	37,917
Lake	5,324	587,581	14,422	129,368	258,219	46,584	64,867	273,630	7,183	367,395	146,241
La Salle	74,899	195,599	8,689	21,195	70,645	11,838	31,165	50,594	1,026	5,181	38,805
Lawrence	6,409	17,255	6,105	(D)	6,250	3,724	2,814	(D)	--	724	6,007
Lee	37,534	23,839	(D)	6,227	17,919	3,733	9,181	14,360	(D)	2,237	44,354
Livingston	62,013	28,352	3,857	9,055	23,109	3,767	5,977	15,809	1,541	1,357	26,362
Logan	45,404	25,962	(D)	3,392	19,689	3,066	6,267	15,437	(D)	1,423	37,474
McDonough	36,471	20,201	(D)	2,816	21,651	3,603	4,193	10,283	(D)	1,711	27,168
McHenry	28,623	175,066	(D)	34,194	60,428	11,405	17,033	50,276	(D)	5,013	39,511
McLean	92,416	87,982	133	23,886	80,155	99,336	42,787	71,068	1,555	7,037	65,104
Macon	34,267	291,618	1,399	47,558	92,203	23,434	62,650	85,596	924	7,157	48,974
Macoupin	33,440	11,604	10,250	8,507	22,276	3,174	7,828	12,744	679	2,611	14,389
Madison	20,163	445,222	3,955	(D)	130,220	31,351	76,401	(D)	1,149	14,846	105,037
Marion	9,576	27,690	(D)	10,656	25,912	3,676	19,048	19,550	(D)	2,826	15,168
Marshall	22,333	9,499	(D)	2,389	5,866	993	1,877	2,251	(D)	511	4,024
Mason	25,040	6,448	(D)	1,723	8,970	1,734	3,170	3,286	(D)	950	7,303
Massac	3,229	11,870	(D)	2,976	4,240	648	9,584	3,163	(D)	839	5,616
Menard	20,663	2,200	(D)	1,480	4,857	786	(D)	2,808	(D)	419	4,723
Mercer	38,252	1,306	424	1,402	6,062	885	2,331	4,028	398	1,069	6,574
Monroe	1,844	874	(D)	7,126	7,548	1,122	3,175	4,005	(D)	743	4,568
Montgomery	28,126	18,010	8,975	5,305	18,793	2,601	9,953	10,482	429	2,019	9,238
Morgan	22,469	37,416	483	13,642	23,813	5,604	12,100	24,196	666	1,876	40,106
Moultrie	23,539	8,348	(L)	2,451	8,703	887	(D)	4,776	(D)	579	3,791
Ogle	36,672	69,977	682	5,448	25,073	3,374	4,510	10,665	737	2,106	16,259
Peoria	21,192	379,377	8,249	85,962	214,386	54,153	77,481	187,887	4,121	32,398	104,538

Total Labor and Proprietors Income by Place of Work, by Major Industry Source, by County, 1975
(Thousands of dollars)

County	Farm	Nonfarm									
		Private								Government	
		Manu-facturing	Mining	Contract Construction	Wholesale and retail trade	Finance, insurance, and real estate	Trans., comm., and public utilities	Services	Other industries	Federal	State and local
Perry	754	15,453	33,008	5,227	7,286	(D)	3,625	6,394	(D)	822	8,606
Piatt	34,007	7,409	(D)	3,033	7,951	1,280	2,923	6,583	(D)	662	7,314
Pike	26,569	4,607	476	2,472	8,974	1,199	3,597	4,604	545	1,229	5,917
Pope	1,274	(D)	405	(D)	828	99	124	635	117	1,295	1,277
Pulaski	2,029	1,821	(D)	741	1,972	204	1,363	2,882	(D)	694	4,076
Putnam	8,701	12,696	(D)	1,580	2,553	331	1,835	1,248	(D)	160	2,033
Randolph	9,943	37,372	10,653	8,314	13,863	(D)	13,348	7,874	(D)	1,971	19,937
Richland	8,589	(D)	9,769	(D)	10,082	1,111	4,910	6,189	(D)	972	9,548
Rock Island	13,257	451,085	2,636	45,072	150,178	34,421	67,828	93,967	1,213	132,708	88,136
St. Clair	11,552	154,451	(D)	82,573	141,947	28,732	105,997	(D)	964	119,534	97,655
Saline	5,036	(D)	12,269	7,911	15,019	2,321	6,863	10,287	(D)	2,013	14,013
Sangamon	58,612	130,131	(D)	68,281	139,172	71,284	(D)	149,994	(D)	37,872	227,073
Schuyler	11,264	756	(D)	733	3,952	291	504	1,814	(D)	454	3,295
Scott	10,900	837	(D)	8,840	2,670	379	1,625	857	(D)	288	2,195
Shelby	37,324	3,415	(D)	2,344	8,255	1,066	3,127	4,687	(D)	1,678	6,645
Stark	19,324	1,834	(D)	464	3,598	504	336	1,547	(D)	329	2,764
Stephenson	39,546	84,898	(D)	9,691	26,185	16,002	7,294	21,663	(D)	2,936	18,257
Tazewell	37,749	520,492	(D)	53,997	71,263	15,015	33,549	36,609	(D)	3,830	36,458
Union	2,798	11,032	(D)	2,247	5,078	818	(D)	4,448	(D)	1,286	25,246
Vermilion	50,686	170,863	1,541	29,952	60,222	11,001	32,339	47,542	775	26,908	34,691
Wabash	7,676	13,480	13,691	7,720	6,188	1,307	2,843	4,852	(L)	679	5,719
Warren	39,496	13,358	(D)	3,076	15,671	2,068	3,464	10,451	(D)	986	7,906
Washington	14,306	3,929	(D)	1,247	6,668	970	2,196	4,103	(D)	970	3,817
Wayne	8,283	10,400	5,964	1,565	9,026	1,039	3,195	5,532	302	732	5,277
White	11,099	2,543	10,888	1,678	10,713	(D)	3,061	5,912	(D)	1,036	7,694
Whiteside	40,407	166,669	(D)	11,578	34,883	4,798	8,675	18,167	(D)	3,090	27,376
Will	12,855	353,582	7,328	75,016	132,832	25,198	124,207	114,184	1,729	12,220	120,920
Williamson	414	24,734	17,304	10,747	28,607	3,528	16,355	14,844	347	12,467	18,211
Winnebago	9,602	618,614	(D)	58,064	186,246	38,772	74,280	152,812	(D)	16,730	101,784
Woodford	38,381	13,015	(D)	3,166	17,499	1,857	3,036	8,578	(D)	880	8,441

(L) Less than $50,000. Data are included in totals.
(D) Not shown to avoid disclosure of confidential information. Data are included in totals.

Source: US Department of Commerce, Bureau of Economic Analysis.

Per Capita Personal Income, Illinois, SMSAs, and Counties, 1970-75, and Relatives,[a] 1970 and 1975
(Residence adjusted)

SMSA or county	Per capita personal income						Per capita income relatives[a]	
	1970	1971	1972	1973	1974	1975	1970	1975
Illinois	4,507	4,805	5,135	5,754	6,272	6,792	114	115
Bloomington-Normal	3,903	4,247	4,369	5,111	5,649	6,182	98	105
Champaign-Urbana-Rantoul	3,516	3,960	4,249	4,778	5,128	5,592	89	95
Chicago	4,935	5,234	5,575	6,165	6,721	7,204	124	122
Davenport-Rock Island-Moline	4,139	4,381	4,792	5,566	6,181	6,686	104	113
Decatur	4,179	4,488	4,852	5,402	5,986	6,317	105	107
Kankakee	3,943	4,281	4,563	5,240	5,621	6,084	99	103
Peoria	4,331	4,639	4,876	5,603	6,297	7,029	109	119
Rockford	4,216	4,487	4,932	5,538	5,983	6,401	106	108
Springfield	4,489	4,835	5,173	5,719	6,305	6,947	113	118
St. Louis	4,270	4,528	4,809	5,244	5,680	6,183	108	105
Adams	3,786	4,118	4,453	5,100	5,346	5,857	95	99
Alexander	2,481	2,751	2,857	3,088	3,688	4,064	63	69
Bond	3,033	3,111	3,411	3,960	4,168	4,857	76	82
Boone	4,745	5,452	5,813	6,456	6,706	7,520	120	127
Brown	3,027	3,228	4,053	4,959	4,930	5,809	76	98
Bureau	3,713	4,242	4,554	5,549	6,101	6,931	94	117
Calhoun	2,924	3,095	3,284	3,864	3,814	4,392	74	74
Carroll	3,987	4,420	4,775	5,412	5,460	5,934	101	101
Cass	3,829	4,080	4,543	5,490	5,949	6,585	97	112
Champaign	3,516	3,960	4,249	4,778	5,128	5,592	89	95
Christian	3,797	4,137	4,515	5,505	6,080	6,696	96	113
Clark	3,315	3,405	4,011	4,643	4,917	5,520	84	94
Clay	2,703	2,845	3,374	3,841	4,150	4,550	68	77
Clinton	3,416	3,587	3,772	4,395	4,588	5,047	86	85
Coles	3,298	3,612	4,002	4,565	5,187	5,739	83	97
Cook	4,919	5,208	5,551	6,156	6,741	7,240	124	123
Crawford	3,393	3,774	4,164	4,901	5,619	6,257	86	106
Cumberland	2,550	2,922	3,512	4,087	4,342	4,864	64	82
De Kalb	3,743	3,986	4,358	5,023	5,550	5,916	94	100
De Witt	3,494	4,031	4,162	5,192	5,832	6,571	88	111
Douglas	3,666	4,224	4,757	5,727	6,195	7,305	92	124
Du Page	5,420	5,796	6,162	6,756	7,319	7,790	137	132
Edgar	3,540	3,937	4,453	5,201	5,484	6,082	89	103
Edwards	3,106	3,423	3,711	4,596	4,707	5,653	78	96
Effingham	3,170	3,472	4,008	4,633	5,111	5,737	80	97
Fayette	2,617	2,742	3,349	3,819	4,073	4,560	66	77
Ford	3,992	4,935	5,147	7,143	7,442	8,508	101	144
Franklin	2,987	3,044	3,461	3,737	4,059	4,536	75	77
Fulton	3,556	3,794	4,233	5,024	5,370	6,113	90	104
Gallatin	3,141	3,066	3,701	4,066	4,938	5,834	79	99

	Per capita personal income						Per capita income relatives[a]	
	1970	1971	1972	1973	1974	1975	1970	1975
Greene	3,199	3,459	3,948	5,295	5,810	6,610	81	112
Grundy	4,350	4,734	4,569	5,509	6,153	6,841	110	116
Hamilton	2,391	2,541	2,847	3,730	4,163	4,997	60	85
Hancock	3,169	3,749	4,248	5,168	5,384	6,491	80	110
Hardin	2,611	2,758	3,061	3,053	3,485	3,923	66	66
Henderson	3,310	3,783	4,226	5,532	5,651	6,681	83	113
Henry	3,903	4,259	4,744	5,566	5,755	6,406	98	109
Iroquois	3,553	4,122	4,262	5,524	5,864	6,806	90	115
Jackson	2,956	3,247	3,546	4,137	4,450	5,112	75	87
Jasper	2,824	3,139	3,901	4,766	4,988	5,776	71	98
Jefferson	3,237	3,400	3,779	4,390	4,801	5,257	82	89
Jersey	3,233	3,262	3,480	4,124	4,462	4,955	82	84
Jo Daviess	3,371	3,491	3,903	4,496	4,649	5,147	85	87
Johnson	2,620	2,959	3,145	3,375	3,355	3,819	66	65
Kane	4,508	4,808	5,175	5,762	6,189	6,554	114	111
Kankakee	3,943	4,281	4,563	5,240	5,621	6,084	99	103
Kendall	5,186	5,362	5,700	6,441	7,297	7,662	131	130
Knox	3,909	4,313	4,711	5,423	5,766	6,234	99	106
Lake	5,360	5,728	6,111	6,698	7,182	7,767	135	132
La Salle	4,003	4,165	4,446	5,163	5,750	6,394	101	108
Lawrence	3,069	3,069	3,577	4,269	4,862	5,173	77	88
Lee	3,496	3,837	4,434	5,187	5,666	6,389	88	108
Livingston	3,792	4,201	4,412	5,492	5,798	6,584	96	112
Logan	3,653	4,083	4,440	5,462	6,111	7,121	92	121
McDonough	2,739	2,989	3,051	3,685	3,945	4,491	69	76
McHenry	4,640	4,970	5,287	5,711	6,053	6,306	117	107
McLean	3,903	4,247	4,369	5,111	5,649	6,182	98	105
Macon	4,179	4,488	4,852	5,402	5,986	6,317	105	107
Macoupin	3,504	3,812	4,130	4,815	5,132	5,699	88	97
Madison	4,107	4,242	4,498	4,988	5,455	5,954	104	101
Marion	3,273	3,491	3,859	4,376	4,746	5,201	83	88
Marshall	3,550	3,952	4,358	5,211	5,755	6,685	90	113
Mason	4,022	4,238	4,294	5,371	5,838	6,495	101	110
Massac	2,811	3,111	3,311	3,644	4,101	4,762	71	81
Menard	3,979	4,514	4,801	5,850	6,158	6,874	100	116
Mercer	3,334	3,722	4,181	5,219	5,667	6,587	84	112
Monroe	3,716	4,228	4,364	4,858	4,971	5,617	94	95
Montgomery	3,467	3,827	4,131	4,880	5,256	6,003	87	102
Morgan	3,997	4,189	4,585	5,274	5,584	6,449	101	109
Moultrie	3,611	3,990	4,480	5,289	5,983	6,575	91	111
Ogle	3,978	4,439	4,735	5,562	5,668	6,252	100	106
Peoria	4,424	4,707	4,977	5,600	6,284	7,050	112	119

	Per capita personal income						Per capita income relatives[a]	
	1970	1971	1972	1973	1974	1975	1970	1975
Perry	3,613	3,863	4,057	4,490	4,821	5,530	91	94
Piatt	4,218	4,779	4,528	5,770	6,280	7,180	106	122
Pike	3,440	3,617	4,042	5,115	4,871	5,568	87	94
Pope	2,251	2,372	2,392	2,492	3,120	3,536	57	60
Pulaski	2,359	2,519	2,628	2,845	3,500	3,901	59	66
Putnam	4,006	4,247	4,658	5,894	6,208	6,567	101	111
Randolph	3,512	3,713	4,064	4,463	4,681	5,170	89	88
Richland	2,909	3,031	3,780	4,566	5,149	5,305	73	90
Rock Island	4,183	4,440	4,816	5,569	6,281	6,810	105	115
St. Clair	3,543	3,850	4,065	4,477	4,899	5,441	89	92
Saline	3,093	3,220	3,423	4,049	4,450	5,058	78	86
Sangamon	4,519	4,854	5,195	5,711	6,314	6,952	114	118
Schuyler	3,113	3,635	4,272	5,124	4,641	5,279	78	89
Scott	3,792	3,993	4,431	5,615	5,933	7,107	96	120
Shelby	3,291	3,552	3,994	4,690	5,217	5,877	83	100
Stark	3,555	3,960	4,187	5,481	6,188	7,278	90	123
Stephenson	4,103	4,463	4,813	5,576	5,926	6,355	103	108
Taxewell	4,273	4,594	4,782	5,574	6,334	7,025	108	119
Union	3,183	3,274	3,645	4,381	4,649	5,148	80	87
Vermilion	3,642	4,013	4,291	5,076	5,408	5,981	92	101
Wabash	3,358	3,432	3,754	4,434	5,312	6,174	85	105
Warren	3,789	4,233	4,486	5,467	5,756	6,874	96	116
Washington	3,144	3,333	3,432	4,358	4,523	5,081	79	86
Wayne	2,917	3,257	3,206	3,971	4,194	4,838	74	82
White	3,087	3,321	3,663	4,303	5,056	5,732	78	97
Whiteside	3,937	4,158	4,618	5,400	5,886	6,552	99	111
Will	4,241	4,490	4,675	5,035	5,352	5,651	107	96
Williamson	3,237	3,419	3,564	3,965	4,238	4,617	82	78
Winnebago	4,162	4,387	4,838	5,438	5,904	6,279	105	106
Woodford	3,928	4,356	4,576	5,746	6,225	6,906	99	117

[a]Percent of national average.

Source: US Department of Commerce, Bureau of Economic Analysis.

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Iroquois County
Personal Income by Major Source, 1970-75
(Thousands of dollars)

Item	1970	1971	1972	1973	1974	1975
Total labor and proprietors income by place of work[1]						
By type						
Wage and salary disbursements[2]	38,346	41,178	45,547	50,645	55,649	58,072
Other labor income	1,958	2,309	2,954	3,162	3,531	3,809
Proprietors income	26,769	39,860	35,387	64,627	59,646	74,158
Farm	18,367	31,276	26,594	55,431	50,757	64,510
Nonfarm	8,402	8,584	8,793	9,196	8,889	9,648
By industry						
Farm	19,629	32,525	27,920	57,028	52,575	66,917
Nonfarm	47,444	50,822	55,968	61,406	66,251	69,122
Private[3]	39,515	42,160	46,706	51,229	55,514	56,936
Manufacturing	11,669	12,685	16,609	18,490	19,220	18,557
Mining	(D)	(D)	(D)	(D)	(D)	(D)
Contract construction	3,460	3,961	3,489	3,464	3,744	4,050
Wholesale and retail trade	12,257	13,003	13,492	14,830	16,689	17,739
Finance, insurance, and real estate	2,113	2,424	2,410	2,557	2,963	2,894
Transp., comm. & public utilities	2,524	2,421	2,762	3,103	3,257	3,237
Services	6,872	6,991	7,216	7,883	8,514	(D)
Other industries	(D)	(D)	(D)	(D)	(D)	(D)
Government	7,929	8,662	9,262	10,177	10,737	12,186
Federal, civilian	647	702	708	836	949	1,101
Federal, military	460	419	457	503	501	521
State and local	6,822	7,541	8,097	8,838	9,287	10,564
Derivation of personal income by place of residence						
Total labor and proprietors income by place of work	67,073	83,347	83,888	118,434	118,826	136,039
Less: Personal contributions for social insurance by place of work	2,369	2,486	2,725	3,168	3,584	3,709
Net labor and proprietors income by place of work	64,704	80,861	81,163	115,266	115,242	132,330
Plus: Residence adjustment	17,736	19,205	20,612	22,608	24,316	25,300
Net labor and proprietors income by place of residence	82,440	100,066	101,775	137,874	139,558	157,630
Plus: Dividends, interest, and rent	23,213	24,076	25,845	29,187	33,469	35,839
Plus: Transfer payments	13,645	15,700	17,293	21,508	23,779	28,548
Personal income by place of residence	119,298	139,842	144,913	188,569	196,806	222,017
Per capita income	3,553	4,122	4,262	5,524	5,864	6,806
Total population (thousands)	33.6	33.9	34.0	34.1	33.6	32.6

[1]Equals the sum of wages, other labor income and proprietors income

[2]Primary source for private nonfarm wages: ES202 covered wages -- Illinois Bureau of Employment Security

[3](D) Not shown to avoid disclosure of confidential information. Data are included in totals

A monthly summary of business conditions for Illinois

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The Pause That Refreshes?

Recent declines in the index of leading economic indicators give increasing evidence of a slowdown in the economy. The leading economic indicators have fallen for three consecutive months, a long enough period to be regarded by some economists as a basis for predicting future economic developments. Additional economic statistics show weakness. Industrial output has fallen, as new factory orders have registered a five-month decline. Employment and income growth have moderated, and consumer spending remains below the level reached in the spring. Reflecting the pause in the economy, the rate of inflation has slowed. Running contrary to the general movement of the economy, interest rates have risen.

Economic Growth Has Stabilized

Industrial production has declined for the first time since the first month of this year. However, just as the January dip reflected a short-lived cause — extremely cold weather — the August decline has been regarded by government economists as a one-month aberration. The fall in output centered in automobile production and electric power generation — which had risen extremely rapidly in July. The August decline may be regarded as a return to a more normal production schedule, not underlying weakness. August production of new cars was down by 5.2 percent from the July level, chiefly because of the new model changeover. New car sales were strong in August, and analysts expect strong sales to continue well into September. Continued strong demand may provide a good base for production increases during the remainder of the year.

The housing market continued on its strong growth path. Home building reached an annual rate of 2.1 million units by the middle of the third quarter. Although the August pace was down slightly from July, the general upward trend appears to be unbroken. Even if the housing boom has passed its peak — as some market analysts believe — completions in coming months will foster sales in such related housewares as furniture and appliances.

While construction of single-family dwellings was up 25 percent from the first half of 1976 to the first half of 1977, multifamily units were up nearly 50 percent. It is expected that multifamily housing will show further strength in the coming months. Increased demand for new multifamily units reflects the skyrocketing cost of single-family dwellings, the short supply of existing multifamily units, and the continued attractiveness of concentrated urban living. The inner cities of large metropolitan areas are experiencing marked increases in new construction, rehabilitation of old units, and urban homesteading. Such efforts are often aided by financial consortiums set up specifically to upgrade decaying urban regions.

Labor Market Has Loosened

The labor market rose by nearly 400,000 in August, as employment expanded 210,000 (see chart, page 12) and unemployment increased by 180,000. This particular combination of increases resulted in a moderate shift in the composition of the nation's labor force. As a result, unemployment rose from 6.9 percent to 7.1 percent (see chart). The unemployment rate for Illinois also inched higher in August, from 5 percent to 5.1 percent.

The major cause of the increase in the overall unemployment rate was a significant rise in unemployment among blacks (14.5 percent in August). The level of unemployment for blacks was up 1.3 percentage points from July and matched a post-World War II high set in September 1975. There are presently 2.4 unemployed blacks for every unemployed white person.

Large increases in both total employment and the labor force are a continuation of a trend persisting through the past year of the recovery. During this period, 2.9 million people have been added to the ranks of the

employed. Even so, the unemployment rate has fallen only 0.8 of a percentage point — as the total labor force has risen by 2.3 million in the same period. The rise in the labor force chiefly reflects the influx of women into the job market.

Research by the San Francisco Federal Reserve Bank has pointed to another reason for higher unemployment rates. In the early 1960s full employment was considered to be about 4 percent. However, according to a recent study by the San Francisco Fed increased unemployment benefits have pushed full employment to an unemployment rate of 5.2 percent. Thus, the basic underlying unemployment rate for our economy is higher than generally assumed and — according to this study — is put under further upward pressure by the very programs that seek to alleviate the problems associated with unemployment. In short, the unemployment rate provides an unreliable indication of the strength of the recovery.

Expenditures Pattern Has Shifted

Consumer spending, which provided most of the economy's first-half stimulus, has moderated in recent months. Fortunately, however, capital spending by businesses has begun to show signs of upward movement. This was good news to both private economists and the Administration who expect capital spending to provide the boost for second-half growth. Businesses have expanded their capital spending plans for this year by 13.3 percent over the 1976 level. Adjusted for inflation, this increase corresponds to an 8.1 percent real growth in capital expenditure plans. However, such an increase is below the Administration's real capital spending goal; according to Administration economists, increases of 10 to 12 percent are necessary to achieve a 5 to 6 percent real GNP growth for this year.

Although retail sales increased in July and August, they have barely regained the pace reached in March and April of this year. Some private analysts had regarded this pause as an indication that the consumer sector had run out of steam. However, a recent survey of consumer confidence suggests that consumer spending is likely to remain strong. Americans with incomes of over $15,000 — who account for two-thirds of all consumption — are reasonably confident about the economy's future. According to this survey, there is no persuasive evidence that higher income groups will reduce their spending rates. Lower income groups have become more pessimistic about the future.

The Rate of Inflation Has Slowed

Wholesale prices have drifted downward since May. The wholesale price index crept up at an annual rate of 1.2 percent in August, reversing a two-month decline. Sagging farm product prices have been the key factor in the weakness in wholesale prices. Since April, farm product prices have fallen 14 percent. Welcome as this may be to housewives, continued declines in farm prices may cause severe problems for farmers, thereby increasing the price instability that has plagued the agricultural sector.

Wholesale prices of consumer goods other than food have also remained well below double-digit rates. Industrial prices, which make up three-fourths of the wholesale price index, rose at an annual rate of 6 percent in August. Price increases at the wholesale level may lead to higher consumer prices in the coming months. Specifically, the prices of gasoline-powered cars and household durables are expected to begin to rise quickly in the near-term future. Until now, these prices have remained fairly stable, helping to moderate the overall rise in the cost of living.

Minimum wage legislation is again before Congress. The bill in the Senate would call for the basic wage floor to be $2.65 per hour by 1 January 1978, with automatic cost of living increases. The Administration is also considering voluntary wage and price standards. Though these considerations are in a preliminary stage, negative — even hostile — reactions to these guidelines are expected.

Governmental initiatives of this sort would adversely affect prices in the service sector. The cost of services has been rising at an annual rate of 9 percent so far this year — a higher growth than for prices of food and durable goods. Minimum wage increases would probably worsen this price trend. Moreover, such a development would be likely to reduce employment in the service sector.

Interest Rates Have Risen

Interest rates have risen sharply since spring. Short-term interest rates have risen more than a full percentage point since late April (see chart, page 12). Intermediate-term interest rates — that is, debt with a maturity of 3 to 7 years — have risen about one-half a percentage point. Over this same period, yields on long-term debt have remained virtually unchanged.

Economists often make a distinction between "nominal" and "real" interest rates. Nominal rates of interest are the ones actually quoted in the market (and shown in the chart). Real interest rates involve an adjustment for inflation (or expected inflation). Presumably, there is currently a smaller inflation adjustment than was the case earlier in the recovery. Hence, real interest rates have risen faster than nominal rates since April.

WILLIAM R. BRYAN

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Local Illinois Developments

Retirement Budgets

The rate of inflation facing a retired couple has slowed markedly. The cost of an "intermediate" standard of living rose 4.2 percent in 1976, down sharply from the 11.2 percent increase in 1975. The estimated annual cost of an intermediate budget for an urban retired couple amounted to $6,738 in the fall of 1976. The costs were $4,695 for a lower standard of living and $10,048 at the higher standard.

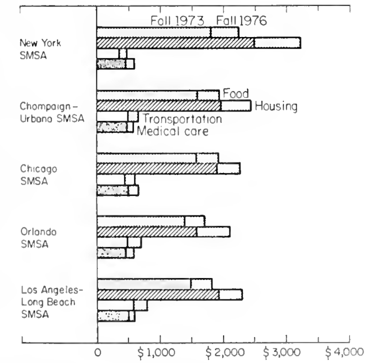
The updated budget costs represented the costs at autumn 1976 prices of three hypothetical lists of goods and services that were specified in the mid-1960s to portray three relative levels of living for a retired couple — simply termed lower, intermediate, and higher. These estimates exclude personal income taxes as an expenditure.

These budget estimates are based on the costs of a self-supporting retired couple (husband age 65 or over), assuming they are in reasonably good health, living in an urban area, and able to care for themselves. The US Bureau of Labor Statistics estimated that retired couples spent 34 to 36 percent of their budget on housing, 25 to 32 percent on food, and from 6 percent at the higher level to 12 percent at the lower level on medical care. Couples at the higher level spent about 3.6 times as much on transportation as did couples at the lower level.

Budget figures provided for 44 metropolitan areas reflect regional variations in climate, consumption patterns, and types of transportation facilities. During 1976, costs in the Chicago-Northwestern Indiana area continued to mirror national averages for food, housing, and medical care, but transportation costs were more than 16 percent below the national average, compared with 8 percent below in 1975. In Champaign-Urbana, food costs continued slightly below the national average and medical costs matched the national average; transportation costs were about 4.5 percent above the national average, compared with 8 percent above in 1975. Costs were highest in Anchorage and Honolulu and lowest in Baton Rouge, Atlanta, and Dallas.

The increase in food prices from autumn 1975 to autumn 1976 was approximately 1 percent at the lower level and less than 1 percent at both the intermediate and higher levels, compared with increases of 7 and 8 percent the year before. Transportation costs rose the most — approximately 9 percent for each budget level — as a result of large cost increases for both public and private transportation. Housing costs rose at approximately the same rate — 6.5 percent — for all three budget levels, but had a greater impact at the higher level because the proportion of the total cost of consumption accounted for by housing is larger at that level.

Budget Costs for a Retired Couple Intermediate Level, Fall 1973 and 1976



Source: US Bureau of Labor Statistics.

Illinois Business Indexes

Item	July 1977 (1967 =100)	Percentage change from June 1977	Percentage change from July 1976
Employment — manufacturing[1]	87.8[a]	− 0.9	+ 1.1
Weekly earnings — manufacturing[1]	201.2[a]	− 2.4	+ 7.7
Consumer prices in Chicago[2]	176.4	+ 0.7	+ 6.5
Life insurance sales (ordinary)[3]	216.1	−16.1	+17.1
Retail sales[4]	223.7[a, b]	+ 0.0	+11.0
Farm prices[5]	192.0	− 4.5	−10.3
Building permits — residential[4]	124.9	−14.0	+26.8
Coal production[6]	68.4	−23.2	+ 1.4
Petroleum production[7]	43.5	− 1.4	− 4.1

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Ill. Dept. of Mines; [7] Ill. Geol. Survey.
[a] Preliminary. [b] Data for June 1977 compared with May 1977 and June 1976.

Amtrak in Illinois

The passenger train was the primary and virtually only mode of intercity travel from the latter half of the 1800s until the late 1920s. Almost all railroads offered some type of passenger service.

Passenger services have declined steadily since the mid-1920s. As a result of declining profits caused by competition from alternative modes, the intercity rail passenger business appeared on the verge of extinction by the late 1960s. From a level of 39.9 billion revenue passenger-miles in 1947, intercity train travel fell to just over 6 billion revenue passenger miles in 1970. Moreover, half of the remaining intercity trains were the subject of discontinuance proceedings before the Interstate Commerce Commission in 1970. Large numbers of passenger trains were discontinued as a result of those proceedings and remaining service steadily deteriorated in quality.

Congress enacted the Railway Passenger Service Act of 1970 in an effort to forestall the demise of the remaining passenger service. The act created a quasi-public enterprise and set as its goal the rejuvenation of rail travel on a profit-making basis.

"Railpax" (renamed Amtrak), formally the National Railroad Passenger Corporation, was established to undertake these objectives. The corporation is financed both privately by the railroads that joined it and publicly through direct subsidy and guaranteed loans.

Operations began on 1 May 1971 with 184 daily trains providing 239 million train miles of service. Its first year's operating expenses left the newly formed corporation a $150 million deficit. The total was about half of what the passenger deficit was when the railroads ran the trains themselves. In the interim, however, the car fleet was cut 57 percent from about 3,000 to 1,295 so the smaller deficit was not entirely an improvement.

Amtrak's operating deficits have grown each year and large federal subsidies (more than $1.5 billion in the first six years) have been the system's life support system. The deficit for fiscal 1978 (which began October 1) is projected to be $535 million.

Amtrak has been plagued with problems from the start. Bad track on some roads and old equipment — the average age of passenger cars is 22 years — have made schedules on many runs unrealistic and have forced Amtrak officials to stretch out schedules to allow for delays. Moreover, critics assert that there is an incentive for railroads to give right-of-way preferences to freight trains rather than to passenger trains. But the major criticism of the legislation that created Amtrak is that the carriers actually lose money operating the trains — for every $1 that Amtrak receives it spends $1.75 for variable operating costs alone.

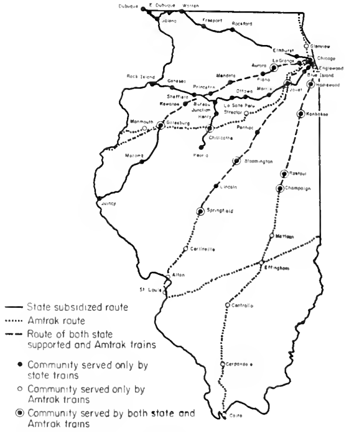
Illinois Intercity Travel Services

Illinois has quietly been developing what is probably the country's best intercity railroad passenger network. State-subsidized trains together with Amtrak service give Illinois 28 daily intercity trains serving more than 40 towns from Cairo in the southern tip of the State to East Dubuque in the northwest corner (see chart).

Illinois has the most extensive state-subsidized rail passenger program in the country. The State appropriates $3.5 million a year (about $13 per passenger) to help subsidize six long-distance trains linking most Illinois cities with Chicago. To improve service the State is also spending $1.1 million to upgrade 21 stations in conjunction with local agencies. Of the six trains subsidized, four are operated by Amtrak. The remaining two trains are operated in cooperation with the Rock Island Railroad with Illinois paying two-thirds of the operating deficits. The state's subsidized routes include the "Black Hawk," which operates between Chicago and Dubuque, Iowa (fiscal year 1976 ridership was 32,005); the "Illinois Zephyr," which operates between West Quincy, Missouri and Chicago (86,612); the "State House," operating between St. Louis and Chicago (66,072); and the "Illini" between Chicago and Champaign (45,174). The Peoria and Quad Cities "Rockets," operated by the Rock Island Railroad, had riderships of 22,243 and 13,514, respectively, in 1976.

Chicago, being a major hub on the national Amtrak system, is the connection point of trains which travel to almost every corner of the country.

Illinois Rail Passenger Routes



Source: **Illinois Department of Transportation.**

Comparative Economic Data for Selected Illinois Cities, July 1977

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$ 69,982[a]	3,682.5[a]	$37,725[a]	4,985	5.1[b]
Percentage change from	June 1977	n.a.	+8.3	−2.7	+0.2	
	July 1976	−6.1	+7.0	−4.3	+4.8	
NORTHERN ILLINOIS						
Chicago		$ 29,325	1,830.7	$28,655		
Percentage change from	June 1977	−0.7	+7.6	−0.4		
	July 1976	−14.7	+5.7	−5.0		
Aurora		$ 3,258	151.1	$ 435	3,124	4.7[b]
Percentage change from	June 1977	−4.9	+27.3	−3.1	+0.3	
	July 1976	+103.4	+11.7	−1.1	+8.1	
Elgin		$ 1,500	87.6	$ 488		
Percentage change from	June 1977	+17.4	+16.2	+9.4		
	July 1976	−18.2	+16.8	+20.4		
Joliet		$ 2,742	371.5	$ 278		
Percentage change from	June 1977	−11.3	+4.3	+0.9		
	July 1976	+81.3	+16.0	+6.1		
Kankakee		$ 3,205	70.4[c]	$ 180	38	7.4[b]
Percentage change from	June 1977	+627.1	+6.5	−4.7	−0.4	
	July 1976	+1,433.4	+12.4	+6.5	n.a.	
Rock Island-Moline		$ 2,610	136.8[d]	$ 859	106	5.1[b]
Percentage change from	June 1977	−28.5	+6.8	+6.7	+0.0	
	July 1976	+46.0	+3.5	+8.3	n.a.	
Rockford		$ 1,875	160.7	$ 711	126	5.3[b]
Percentage change from	June 1977	−48.6	+5.9	−4.4	−0.1	
	July 1976	−48.1	+10.5	+1.4	+5.4	
CENTRAL ILLINOIS						
Bloomington-Normal		$ 3,216	58.0	$ 688	57	4.2[b]
Percentage change from	June 1977	−35.1	+17.7	−9.2	+0.4	
	July 1976	−24.4	+12.8	−4.7	+7.1	
Champaign-Urbana		$ 1,850	58.0	$ 556	70	4.0[b]
Percentage change from	June 1977	−57.5	+12.1	−11.0	−0.2	
	July 1976	+32.6	+10.2	−9.5	+3.1	
Danville		$ 1,427	44.5	$ 383	40	6.9[e]
Percentage change from	June 1977	+37.7	+3.6	+11.4	−0.4	
	July 1976	+156.6	+12.0	+3.5	n.a.	
Decatur		$ 6,237	114.4	$ 417	55	6.5[b]
Percentage change from	June 1977	+7.1	+3.3	−50.3	−0.4	
	July 1976	+32.8	+9.7	+3.9	+4.9	
Galesburg		$ 1,066	32.5[c]	$ 137	29	6.9[e]
Percentage change from	June 1977	−33.5	−7.3	−6.9	−0.4	
	July 1976	+103.0	−13.7	−3.5	n.a.	
Peoria		$ 6,334	184.8	$ 1,090	164	5.1[b]
Percentage change from	June 1977	−41.4	−2.1	−5.1	+0.1	
	July 1976	+73.1	−2.0	+7.2	+5.5	
Quincy		$ 558	47.5	$ 167	43	7.1[e]
Percentage change from	June 1977	−14.2	+15.2	−16.8	−0.3	
	July 1976	+59.4	+7.2	−11.6	n.a.	
Springfield		$ 3,841	154.0	$ 1,916	88	4.7[b]
Percentage change from	June 1977	−28.9	+28.3	−15.1	−0.3	
	July 1976	−25.5	+6.3	−17.6	+5.5	
SOUTHERN ILLINOIS						
East St. Louis		$ 72	27.9	$ 148		
Percentage change from	June 1977	n.a.	+1.7	−17.4		
	July 1976	−70.9	−1.7	−3.2		
Alton		$ 89	82.1	$ 106	240	6.2[f]
Percentage change from	June 1977	−43.4	+7.9	−11.5	−0.5	
	July 1976	−36.4	−4.7	+0.0	n.a.	
Belleville		$ 337	32.9	$ 236		
Percentage change from	June 1977	−40.2	+16.2	+5.0		
	July 1976	−95.7	+15.8	+2.6		
Carbondale-Murphysboro		$ 440	37.1	$ 275	26	7.8[e]
Percentage change from	June 1977	−42.1	+20.0	+12.7	−0.0	
	July 1976	−41.9	+10.4	+24.4	n.a.	

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 12 August 1977. [4] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Labor market area. [f] Madison and St. Clair counties. n.a. Not available.

The Future of Banking and Thrift Industries in Illinois

DONALD R. HODGMAN

Banking and thrift industries are in a state of ferment nationwide and in Illinois. Pressures for change in the organization and activities of commercial banks, savings and loan associations, and credit unions have been building up from a variety of sources. Among the portents of change are the recommendations of various national commissions, congressional hearings and proposed new legislation, and recent recommendations and decisions by national and state regulatory authorities. In Illinois there is the continuing controversy over unit versus branch banking and the question of how this controversy will be affected by expanded activities on the part of savings and loan associations and credit unions and by innovations in financial services made possible by developments in the technology of computers and telecommunications.

The general thrust of legislative proposals and recent regulatory decisions is to liberalize the degree of specialization in financial services imposed upon banks and thrift institutions and to remove certain constraints upon competition among these institutions. The consequences of increased competition for the institutions themselves and for their customers are not a simple matter to assess and will vary with the particular legislative and regulatory measures adopted. The resulting uncertainty has occasioned a good deal of lobbying effort at the national and state levels by trade associations seeking to defend perceived interests of the groups they represent. The diversity of interests being defended has thwarted the formation of a majority coalition required to pass significant reform legislation either in Washington or in Springfield. However, the forces of change arising from competitive market pressures, technological innovation, and the capability for providing improved financial services appear to be too compelling for the status quo to continue for long.

The issues involved in the prospective changes have important public policy aspects. This article presents background and interpretation of issues relevant to these public policy aspects.

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National Developments

Efforts toward comprehensive reform. In recent years three attempts have been made to achieve a comprehensive and balanced reform of the nation's banking and thrift industries. The first was that of the Commission on Money and Credit established in 1957 as an independent organization under the auspices of the Committee for Economic Development. This commission produced a series of studies and a comprehensive set of recommendations for reform which were never espoused by the executive or legislative branches of the federal government.

A second major effort to achieve a comprehensive reform was launched with the appointment by President Nixon in April 1970 of a presidential Commission on Financial Structure and Regulation (also known as the Hunt Commission after its chairman). This commission undertook to study the problems of banks and thrift institutions as well as those of private pension plans and reserve life insurance companies. Its report in December 1972 carried a series of recommendations primarily focused on banks and thrift institutions and dealing with such matters as regulation of interest rates, deposit and loan functions, reserve requirements, chartering and branching, taxation, and changes in the organization and functions of regulatory agencies. This report, although it was widely discussed, also did not result in any significant legislation.

A third comprehensive review of the nation's financial institutions and their regulation by the federal government was begun in April 1975 under the auspices of the House Banking, Currency, and Housing Committee together with the Subcommittee on Financial Institutions, Supervision, Regulation, and Insurance. This project, known as the Financial Institutions in the Nation's Economy (FINE) Study, encompassed five areas: the relationship between banks and thrift institutions and desirable changes in their respective activities, the or-

ganization of federal regulation, the structure and operations of the Federal Reserve System, the operation of US banks abroad and of foreign banks in the US, and the operation of bank holding companies. This congressional effort produced a variety of studies, hearings, and bills but no enacted legislation during 1976.

Current congressional legislation. In 1977 congressional proponents of reform have adopted a more selective approach toward legislation. In extending the Interest Rate Control Act, Congress amended the act to broaden substantially the powers of credit unions in setting the terms on share accounts and in making loans. A bill has been introduced in the Senate (S.2055) to permit all commercial and savings banks, savings and loan associations, and credit unions to offer individuals and nonprofit organizations interest-bearing checking accounts (NOW accounts). The same bill authorizes the federal chartering of mutual savings banks and the establishment of a central liquidity fund for credit unions. Other bills seek to broaden the lending powers of savings and loan associations. Related issues upon which legislative proposals have been made are those of reserve requirements for NOW accounts, continuance or suspension of ceilings on deposit account interest rates payable by financial institutions, authorization for the Federal Reserve Board to pay interest on required reserves or to reduce reserve requirements for smaller banks so as to lighten the burden of membership, and proposals to remove differential interest rate ceilings on savings accounts for any institution that elects to offer check-like accounts. Passage of any substantial portion of these bills would enable thrift institutions to offer loans and deposit services of kinds that have in the past been the more or less exclusive preserve of commercial banks. This movement of thrifts in the direction of full-service financial institutions is certain to increase the competition for customers in local financial markets with effects I shall discuss later.

Technological Innovation: EFTS. The advent of electronic fund transfer systems (EFTS) is another development that promises to alter competitive conditions for banks, savings and loans, credit unions, and their customers. A nationwide EFTS is technologically feasible at the present time. A limited regional system is in operation in Iowa. Components of such a system are in operation in various banks, savings and loan associations, and retail establishments throughout the United States and in Europe. EFTS components include cash-dispensing machines, automatic teller machines (ATMs), automated clearinghouses (ACHs), and regional switching centers.

Despite the proven technological feasibility of EFTS its widespread adoption has been delayed by a variety of factors including uncertainty of cost savings for individual adopters in the short run, and the actions of legislatures and courts which have restrained the use of off-premise ATMs and ACHs in many states. There are also questions of public policy such as form of ownership and control (e.g., proprietary, cooperative, or public utility), the related question of accessibility for different financial institutions, antitrust considerations bearing on cooperative systems, standardization of components from different suppliers, safety and reliability of the system, and the design of adequate safeguards against intrusion upon funds or information. All of these issues have concerned the National Commission on Electronic Fund Transfers, whose progress report, *EFT and the Public Interest,* was published in February 1977. A parallel study by the Illinois Electronic Funds Transfer Systems Study Commission produced a *Report and Recommendations to the General Assembly* published in December 1976.

The complexity of the various issues surrounding the development of EFTS is sufficient to explain the deliberate pace at which this development has proceeded. However, the steady increase in the volume of check and credit card transactions in the US economy will subject financial institutions and their customers to steadily rising costs unless alternative, more efficient transactions methods are adopted. One study by the Federal Deposit Insurance Corporation estimates that rising costs will become prohibitive within 25 years so that EFTS will become essential. It is likely, however, that competition among financial institutions in providing customers with greater convenience and more sophisticated financial services may occasion widespread introduction of EFTS much sooner than that.

The State Level

Branching. In Illinois the competitive situation among commercial banks, savings and loan associations, and credit unions has been and will be influenced by national and state legislative and regulatory developments, by provision concerning ownership and access to EFTS, and by the response of the industries to these changes. Currently all commercial banks, whether chartered nationally or by the State, are subject to the strict limits set by Illinois law concerning branching: no more than two walk-up or drive-in facilities in addition to the main office, these restricted to a narrow range of permissible functions related to handling of cash, checks, and loan repayments, and located less than two miles from the main office. The US Supreme Court has ruled that automatic teller machines (ATMs) remote from the main office are "branches" and thus subject under the terms of the federal McFadden Act to limitations on branching imposed by state law. Thus, current Illinois law sharply limits branching and development of ATMs by banks.

Federally chartered savings and loans *may* branch in Illinois subject to approval by their regulatory authority, the Home Loan Bank Board. Under terms of the Illinois Savings and Loan Act, branching by *state chartered* S&Ls is governed by the same provisions of the Illinois Banking Act that apply to banks. However, a recent revision of the state Savings and Loan Act empowers the commissioner to authorize the continuation of the previous site of an S&L home office as a "facility" in the event the home office is relocated. This provision has resulted in successive home-office relocations accompanied by the appearance of branch-like facilities in a growing number of state-chartered S&Ls throughout the State. Credit unions, whether federally or state

chartered, have the legal right to branch but are limited in their practical use of this power by membership restrictions. Thus, under present laws, S&Ls in Illinois have an advantage in the establishment of branches.

Checking-account service and interest. In the competition for customer deposits or share accounts, depository institutions rely on service, interest, and loan accommodation in addition to convenience of location. For many years commercial banks have had a monopoly on the provision of checking-account services for making third-party payments. Recently this monopoly has been breached in the New England states by federal legislation authorizing S&Ls, credit unions, and mutual savings banks as well as commercial banks to provide check-like services in the form of negotiable orders of withdrawal (NOWs) drawn on customers' interest-paying savings accounts. Currently there is a bill in the US Senate to authorize NOW accounts (in effect, interest-bearing checking accounts) for all depository institutions throughout the United States.

Pending such federal legislation the S&L commissioner in Illinois recently sought and received from the legislature power to authorize state-chartered S&Ls to offer NOW accounts. These must be non-interest bearing (hence, NINOWs), since federal legislation currently prohibits the payment of interest on check-type accounts save in New England. However, telephone-requested transfer of funds from savings to a NINOW account is a service offered by S&Ls for those customers who find it worth the trouble. Currently 57 of the 261 state-chartered S&Ls in Illinois offer NINOW accounts. Moreover, check-like "share draft" accounts currently are offered to members by 36 of the 3,350 credit unions in the State on a pilot basis. Introduction of share draft accounts by other credit unions in the State is in abeyance pending clarification of legislative and regulatory decisions, both state and federal. Decisions favoring the further spread of share draft accounts appear likely.

In consequence of these developments commercial banks face a competitive challenge in the provision of checking account services, long a commercial banking monopoly. The position of the commercial banking industry on this issue is to resist vigorously legislation and regulatory rulings that would authorize S&Ls and CUs to offer check-like accounts. As a quid pro quo for such authorization, should it come, the banking industry seeks parity of interest rate ceilings (current ceilings provide a differential in favor of S&Ls and CUs), uniform reserve requirements, and equal tax treatment. The S&Ls and CUs seek to maintain these current advantages. Thus, both state and federal legislatures are subject to strong lobbying efforts to influence pending legislation bearing on these matters.

EFTS in Illinois. EFTS is a massive technological innovation whose capabilities, once realized, can profoundly effect competitive conditions and customer relations for commercial banks and thrift institutions in Illinois. These capabilities include the replacement of the paper flow of check processing with the flow of electronic messages, the provision of expanded financial services for customers (for example, more complex financial records, processing of payrolls, credit information), and the extension of the effective service area of a financial institution far beyond the local market area of its brick and mortar locations. Recognition of these possibilities and their implications for the banking and thrift industries, for retailers, and for consumers has focused attention on current and prospective legislation and regulatory decisions relating to EFTS. Investigations and recommendations of a national commission have been paralleled on the state level by those of a study commission appointed by and reporting to the General Assembly. Although various bills have been introduced in the legislature, none has been enacted other than one (S.1023) extending the life of the study commission and enlarging its membership.

The lead in developing EFT systems in Illinois has been taken individually by the state's two largest banks: Continental Illinois Bank and the First National Bank of Chicago. Each of these banks has placed electronic facilities in a few retail stores in the Chicago area. Court decisions subsequent to the installation of these facilities have classified them as "branches" with the result that under the Illinois Banking Act the banks' own deposit customers are barred from use of the facilities for other than check guarantee purposes. Ironically, the service of deposit and withdrawal of funds in addition to check guarantee is available at these facilities to the deposit customers of those few S&L associations that have contracted with one or the other of the two banks to participate in the network. This difference is due to the fact that branching is legal in Illinois for the S&Ls. In a related move the Illinois Bankers Association has sponsored the formation of a corporation, Electronic Funds Illinois (EFI), to plan for a cooperatively owned EFTS within the State as a solution more congenial to smaller banks than the proprietary systems undertaken by the two large banks. Some 650 banks currently are members of EFI, whose activities have not yet reached the hardware stage.

Implications for Banks, Thrift Institutions, and Consumers in Illinois

The forces of market competition are making themselves strongly felt in the banking and thrift industries of the United States. To this trend Illinois is no exception. Market forces lie behind the current and proposed changes in legislation and regulation at both national and state levels. Market forces of competition provide the stimulus to technological innovation in the form of EFTS. The pace of change varies on different fronts. Credit unions and S&Ls, whether national or state chartered, have branching capability. State-chartered S&Ls can offer check-type, NINOW accounts. Both state and federally chartered CUs are experimenting with check-type, share-draft accounts. Both lending and deposit powers of CUs have been expanded by Congress in its recent extension of the Interest Rate Control Act. In the US Senate a floor vote is imminent on a bill (S.2055) to authorize all depository institutions to offer check-type NOW accounts to individuals and to pay interest to holders of these accounts. This bill also provides for much broader lending powers for federal S&Ls.

Illinois state banking law still prohibits full service branches for commercial banks. But the expanding powers and branching capabilities of S&Ls and CUs are potent arguments that favor comparable treatment for commercial banks. Unit banking no longer can shelter smaller banks from increasing competition in their local markets. Under the pressure of market competition the S&Ls and CUs are seeking and acquiring powers that make their functions less specialized. They are becoming more like banks, whose functional distinction has always been in their monopoly of checking accounts and the variety of their lending powers.

The development of EFTS networks in Illinois is likely to proceed somewhat gradually but inevitably. Many legal problems must be resolved in the development of EFTS in such areas of the law as the Uniform Commercial Code governing commercial transactions, security of information, antitrust, and the regulation of financial institutions. Moreover, EFT technology is very expensive to install and thus requires volume use to become fully cost efficient. This raises the problems of customer acceptance and of some form of cooperative use (although not necessarily cooperative ownership). These are the considerations that suggest a gradual rather than a rapid development of EFT systems in Illinois.

Increased competition in local markets for customers' savings and check-type accounts appears inevitable. Deposit and loan services offered by banks, S&Ls, and CUs overlap more and more. Interest rate competition for deposits will intensify with the spread of NOW accounts. There is a possibility that regulated ceilings on deposit interest may be removed or at least modified to end the interest-rate differential enjoyed by S&Ls and CUs on savings accounts. EFTS as it develops will be accompanied by capabilities for market area interpenetration far greater than at present. Interstate retail banking may become a reality. With competition increasing through these channels the resistance to branch banking in Illinois may become pointless and disappear. Even though many bankers and thrift-institution officers might prefer a return to "the good old days" of greater specialization of function and less competitive pressure, the impersonal forces of market competition appear too strong for the clock to be turned back.

Various effects of the increased competition will be felt by banks and thrift institutions and their customers. New England experience with NOW accounts reveals a doubling of bank costs (including interest) for NOW accounts as compared with demand deposit accounts of individuals. A study of the Federal Reserve Board of Governors predicts a 6 percent decline in bank profits nationwide if NOW accounts are offered by all depository institutions and a 20 percent decline should interest be authorized for all demand deposits. Smaller banks and those having a higher proportion of household deposits will experience more severe pressure of rising costs and falling profits. The Fed study states that 2.5 percent of all US commercial banks may suffer severe difficulties, especially banks with less than $25 million in deposits. The New England experience suggests that banks should meet rising costs by more careful and explicit pricing of banking services for depositors. Bankers should be prepared to accept some decline in market share of household accounts in those instances when such accounts cannot be priced at a profitable basis. The ability of banks, especially those with larger and more diversely specialized staffs, to offer a broad mix of financial services will continue to be a strong selling point and may well strengthen as the service capabilities of EFTS are exploited.

S&Ls and CUs can reasonably aspire to a more ambitious role than they now perform in meeting the financial service needs of households. Few, if any, of these thrift institutions, however, have the internal organization and experience to become competitive with well-run commercial banks in many of the services performed by banks for business firms and other organizations. In any all-out competition between thrifts and banks in the absence of protective legislation of the kind now in force, banks, because of their broader past experience, are almost certain to prove stronger.

The increasing competitive pressures facing banks in Illinois — both from outside banking by the thrift institutions, and from inside banking as EFT expands and matures — suggest that a fairly dramatic change in the organizational structure of Illinois banking from unit to branch form may soon occur. Unwelcome as this development may be to the owners and officers of many independent, smaller unit banks, and for understandable reasons, they are well advised to consider carefully their options should the cost of independent survival become prohibitive.

Consumers of financial services performed by banks and thrift institutions stand, as a group, to benefit from increased competition. Small savers should earn higher interest on their savings accounts. Heavy users of checks may pay more for the service under more explicit charges than at present, light users — less. This appears fair, since there is no reason light users should subsidize heavy users. It is sometimes argued that higher bank interest costs will be passed through to higher loan interest charges. Competitive pressures will determine the feasibility of this action. A squeeze on bank interest differentials may result in a reallocation of deposit and lending functions between banks and thrift institutions. In any event there is no reason that savers should subsidize borrowers.

Banking and thrift institutions in Illinois face a future in which their legal, technological, and competitive environments appear likely to undergo significant and possibly rapid change. In the process the organizational and market structure of the industries will alter and individual institutions will be challenged to adjust their internal organization, the services they perform, their costing and pricing of services, and their marketing strategies. The challenge for management and for public policy is to accomplish the needed adjustments in such a way that health of the industries will be preserved and the public interest served in the form of improved financial services efficiently performed and rationally priced.

A Policy to Stabilize Prices and Reduce Unemployment

PAUL J. WELLS

The across-the-board failure of Congress and the several administrations of the past half-dozen years to develop even the bare rudiments of a program to deal both with the problem of unemployment and the problem of inflation is a national disgrace. This long-standing failure of national policy, together with the equally long-standing failure of the economics profession to formulate a cure for these two economic ills, has by now all but obliterated the simple truth that society does have at hand the means to reduce both the rate of inflation and the level of unemployment. The means available are straightforward, easy to grasp, and entirely consistent with society's democratic values. The program begins by acknowledging the startling fact that the US economy currently is wasting on the order of $132 billion worth of potential GNP a year. It concludes with a plan to utilize what is being wasted to stabilize prices and to create genuine jobs for the unemployed.

The Waste of Potential GNP

The billions of dollars worth of potential GNP now being wasted by society is the result, of course, of this country's long-standing but totally unnecessary high level of involuntary unemployment. There are no laws of nature, or of economics, or of man that require a substantial part of society's work force to be without jobs and a sizable part of its capital stock to remain idle for long periods of time. Unemployment serves no purpose; it simply imposes needless burdens on society. The Bureau of Economic Analysis of the US Department of Commerce has estimated that because of unemployment, the potential or full employment GNP of the economy exceeded the actual or produced GNP of the economy by 132 billions of current dollars in 1976. In 1975 the current dollar gap between potential and actual GNP amounted to $159 billion, and for 1974 the gap was a smaller but still towering $67 billion (see chart). Unemployed labor and idle capital equipment have cost society the astounding total of 358 billion of current dollar final product and 358 billion of current dollar income over just the past three years of stagnation and inflation. Although the Bureau of Economic Analysis no longer publishes its series on potential GNP and the GNP gap, one can estimate that this gap is now running at least $100 billion a year. This enormous waste of output which could have been produced and income which could have been earned is an especially grievous waste in view of the many urgent individual wants and serious social needs now being left unattended. The US is not so wealthy, nor its needs so completely satisfied, that it can afford to waste $100 billion worth of resources year after year.

It is sad but true that no matter how wantonly society has wasted its resources in the past, no part of this waste can be recaptured to help solve our current economic problems. What society can do is develop a program to reduce future waste of potential GNP. To see how society can avoid wasting large quantities of potential GNP, we recall that under the more desirable conditions of stable prices, an increase in spending, private or public, would solve the problem of unemployment. Higher spending generates a greater volume of sales, greater sales bring more production and hence more employment. However, with a decade-long inflation behind us, and still more to be expected in the months and years ahead unless sensible economic measures are adopted, additional spending at this time would be largely absorbed by rising prices and would thus provide little in the way of additional jobs for the unemployed. Furthermore, additional spending by itself would do nothing to mitigate the rate of inflation.

Needed: A Viable Economic Policy

What is needed today is an economic policy which will restrain the upward spiral of money wages, costs of production, and prices while providing the public with more income to spend. With prices stabilized, additional spending would then have the normal effect of increasing output and employment instead of merely validating still higher prices. To the extent that society can utilize the $100 billion of wasted GNP which unemployment now visits upon us, a successful war on inflation and unemployment can be waged at precisely zero cost to society.

A policy which would take advantage of the economy's gross waste of potential GNP to suppress inflation

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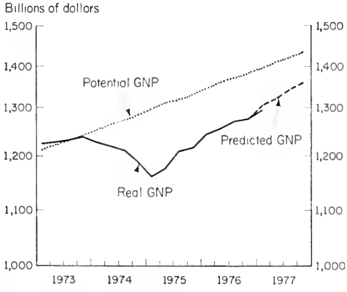
and increase employment would consist of (1) a permanent tax reduction coupled with (2) a wage increase provision. Specifically, a $30 billion reduction, say, in the federal income tax liabilities of the families occupying the lower 80 percent of the income distribution, combined with a provision or guideline that money wages and salaries rise by no more than 3 percent a year for as many years as the tax cut remains in effect, would both reduce inflation and stimulate employment.

The main inflationary threat to the economy comes from the dynamics of the well-known money wage-cost of production-price spiral. Money wage increases have for some years been running well ahead of economy-wide labor productivity gains. The excess of wage increments over productivity growth necessarily raises the costs of producing every single good and service the economy provides. As costs of production rise, businesses find it necessary to raise the prices they charge for their output, both to cover their higher operating costs and to preserve what they consider to be their necessary profit margins. But as prices climb in response to higher costs of production, the real take-home pay of labor falls. The fall in take-home pay then establishes the conditions for another healthy catch-up-on-inflation wage hike. As wages rise once again, so also will costs of production and prices rise again, and so also will wages rise in response to rising prices. Once a wage-cost-price inflation takes hold, for whatever reason — perhaps because prices originally began to rise owing to excessive spending when the economy was operating at full employment — such an inflation if left untreated will live and grow long after the initiating cause has died out.

It follows that to reduce the rate of inflation the dynamic of the wage-cost-price spiral must be broken. However, it should be broken in a way which does not cause more unemployment, more deprivation, and less economic opportunity for those already living at the bottom of the income distribution. Besides, the US experience has shown that sustained involuntary unemployment has done little to slow the growth of wages, costs, and prices. To break the self-feeding dynamic of inflation in a socially advantageous manner two conditions must be satisfied. First, money wages and salaries across all occupations and industries must rise by no more than the average productivity growth of the economy at large. Satisfying this condition will contribute greatly to stabilizing costs of production and hence prices. Second, labor's legitimate demand to catch up on inflation must be met, but met in a way which does not pave the way for more inflation — met in a way which avoids money wage increments in excess of productivity gains.

Real GNP in 1972 Dollars



Source: Council of Economic Advisers.

A permanent tax cut would satisfy both of these requirements by providing labor with a catchup on inflation in a way which does not raise business costs and so does not make for higher prices. A tax cut coupled with a wage guideline which would stabilize costs and prices would provide labor with a permanent increase in its real income — a once-and-for-all recovery of losses due to inflation. In marked contrast, cost-increasing wage hikes provide only transitory income gains to labor — gains which will be taken away by follow-on price increases. Viewed this way, it can be seen that in light of current economic conditions, tax cuts correctly applied are anti-inflationary. Similarly, income-reducing tax increases now would provoke more inflation.

Although a tax reduction coupled with limited money wage increases would break the dynamic of the wage-cost-price spiral, this policy would neither eliminate nor even deal with the problem of higher costs and prices due to commodity shortages or due to excessive overall spending — called excess demand inflation. Little can be done in the short run to suppress inflation due to commodity shortages, and it would help if this fact were recognized by both capital and labor. Excess demand inflation, on the other hand, presents no immediate threat to the economy simply because actual GNP is running far short of the economy's full employment GNP. In the future, when the economy has moved to the neighborhood of full employment, excess demand inflation could again bring on rising prices just as it did in the years 1966 through 1969. When full employment is reached, new economic policies will be needed to deal with the new economic circumstances. The policy called for at a time of full employment would be one which would limit the rate of growth of the money supply in order to limit the growth of spending to a rate which matches the full employment growth rate of the economy. The policy to prevent the onset of excess demand inflation would not include that of raising taxes for fear this income-reducing measure would touch off a renewed wage-cost-price inflation.

A $30 billion tax reduction spread over a full year would increase the flow of disposable income to households by something less than $600 million a week. Most of this additional income would be spent but some would be saved depending on how households apportioned their additional income. The increased flow of spending would draw forth an equal dollar increase in the supply of civilian goods and services, with the additional production coming from the employment of now-idle workers and capital equipment. In view of the fact that the

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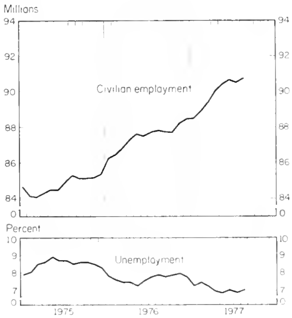
economy is operating with over $100 billion of slack, this relatively modest additional flow of spending would by itself place little if any upward pressure on costs and prices.

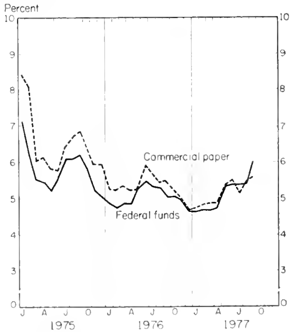
However, if businesses responded to the increased spending by raising their prices as well as their rates of production, then a price guideline to supplement the wage guideline would be in order. Businesses need not take advantage of rising sales to raise prices and so fatten their profit margins. But if they do, the cause of the resulting climb in prices would not be excessive spending but simply rising profit margins. The danger of such a profit margin inflation is that it could well set off another wage-cost-price inflation. If we suppose that businesses do not boost their profit margins, perhaps because they have agreed to observe price guidelines, then the equal rise in the demand and supply of civilian goods attendant upon a tax reduction will neither add to nor subtract from inflation. What the extra spending will do is pull the economy in the direction of higher levels of employment and higher standards of living by providing genuine jobs for the unemployed.

Employment and Unemployment



Source: US Department of Labor.

Interest Rates



Source: Federal Reserve Board.

A monthly summary of business conditions for Illinois

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Inflation: Some Causes and Some Partial Remedies

FRANKLIN R. SHUPP

Despite the adoption of a variety of anti-inflationary policies, the rate of inflation in the United States has exceeded 5 percent in seven of the past eight years. This record contrasts sharply with that of the previous 40 years in which the 5 percent inflation figure was exceeded only during World War II and the Korean War. This extreme contrast has led some economists to speculate that a dramatic structural shift has taken place recently in the United States economy, and some noneconomists to speculate that economists no longer understand the inflationary process.

Although the structural shift hypothesis does not appear to be valid, it is nevertheless true that the forces generating inflation in the 1970s appear to be more varied and complex than the mechanisms outlined in the standard textbook treatment of inflation. Some of these additional forces are outlined in the next sections. It is also true, as I demonstrate later, that the traditional remedies which have been advanced by some economists recently are inappropriate to this new more complex inflation, and it is this fact which has strained the credibility of economists with the general public.

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Traditional Inflation Models (I)

Traditional or orthodox inflation models all assume that inflation is caused by "too much purchasing power chasing too few goods," or put more formally, that the general price level is driven up because aggregate demand exceeds aggregate supply. In these models aggregate supply is defined as the *full* employment output of the economy. Full employment itself is defined in terms of a targeted unemployment level. A common definition of targeted unemployment is that level of unemployment at which the number of unemployed persons equals the number of job vacancies. In the United States this unemployment-vacancy equilibrium obtains at an unemployment rate of approximately 4 percent. (These unemployed are assumed to be frictionally or structurally unemployed; that is, they are assumed to be simply changing jobs or to lack marketable job skills.) In a homogeneous labor market, this unemployed-vacancy equilibrium is assumed to imply a constant wage level, and the corresponding full employment output is assumed to be consistent with a zero price increase.

There are at least three variants of the excess demand inflation model. These are: (i) output excess demand, (ii) input excess demand, and (iii) money excess demand.

Output excess demand. In this model inflation is induced whenever aggregate demand exceeds full employment output. Since aggregate demand is typically financed by income earned by those producing the output, on average or in equilibrium, aggregate demand cannot exceed the value of aggregate output. More particularly, private consumption and investment demand must, on average, equal disposable income, and government de-

The U of I in the Illinois Economy *By G. J. D. Hewings and others* / *Page 7*

mand must, on average, equal tax receipts. In the short run, if either the consumer or the investor is optimistic, private demand can exceed disposable income. Similarly the government can choose to run a deficit. Neither of these situations is inflationary unless total aggregate demand exceeds full employment output. It is important to reiterate that consumer and/or investor optimism and government deficits are inflationary only in the special case when the economy is already producing at capacity, i.e., is already producing the targeted full employment output.

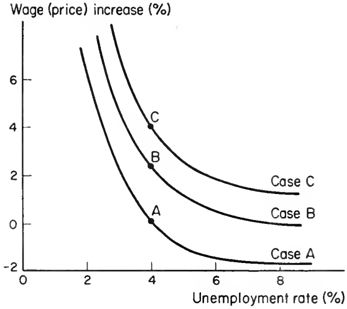
Input excess demand. Whenever there is aggregate excess demand in the output market, there must be a corresponding excess demand in the input or labor market because output excess demand *is defined* in terms of full or targeted *employment* output. If demand exceeds supply in the labor market, then wages rise, and this implies increased costs and therefore increased prices. Recall that labor market equilibrium was defined by 4 percent unemployment. Consequently, when unemployment falls below 4 percent, wages should rise; when unemployment exceeds 4 percent, wages should fall. When the economy is operating at full or targeted employment, that is, when unemployment is approximately 4 percent, there is no market pressure for a wage (or price) increase. This relationship between unemployment and wage or price increases is called the *Phillips Curve* and it is given in Chart 1. (See particularly the curve labeled case A.)

Because the labor market is not necessarily homogeneous certain complications are introduced. Consider a labor market which contains only miners and auto workers, and these in equal numbers, and consider further the following three special cases.

Case A. The market for both miners and auto workers is characterized by 4 percent unemployment, which implies a zero wage rise in each submarket, and therefore a zero wage increase for the aggregate labor market as given by point A in Chart 1.

Case B. The market for miners is characterized by 2 percent unemployment and a corresponding 6 percent wage increase, and for auto workers by 6 percent unemployment and a 1.5 percent wage decrease. The aggregate labor market is then characterized by 4 percent unemployment and a (6 percent + (−1.5 percent))/2 or

Chart 1. The Phillips Curve Relationship



2.25 percent wage increase. This implies an upward shift in the Phillips Curve so that it passes through point B in Chart 1.

Case C. The market for miners is characterized by 2 percent unemployment and a 6 percent wage increase and *initially* for auto workers by 5 percent unemployment and a 1 percent wage decline. Now assume that the auto workers are influenced by the wage settlement obtained by the miners, and they refuse to accept a wage cut and even insist on a 2 percent wage increase as they try to maintain their *relative wage position,* or at least try to minimize their relative loss. The auto firms can grant the 2 percent wage increase only by raising auto prices. Given the slack demand for autos, which is responsible for the hypothesized initial 5 percent unemployment figure in the auto market, this price increase will cut auto demand even more. We assume therefore that if the auto workers insist on the 2 percent wage increase unemployment will rise in that market from the initial 5 percent to 6 percent. In this case, for the total labor market, unemployment equals (2 percent + 6 percent)/2 or 4 percent and the wage increase also equals (6 percent + 2 percent)/2 or 4 percent. This implies that the aggregate Phillips Curve shifts up even further so that it passes through point C in Chart 1. The Phillips Curve given by case C is roughly consistent with the US historical record of the two decades prior to 1970.

Money excess demand. The third model of excess demand inflation states that inflation is caused by an unwarranted increase of the money stock by the Federal Reserve System. There are two alternative theories of how this causes inflation. *Keynesians* maintain that this extra money implies lower interest rates and cheaper credit which induces more investment and consumption demand. If this additional demand increases aggregate demand beyond full employment output, inflation ensues. *Monetarists,* on the other hand, claim that any increase in money represents increased purchasing power which raises aggregate demand. Again only if this higher de-

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mand exceeds full employment output will prices necessarily rise.

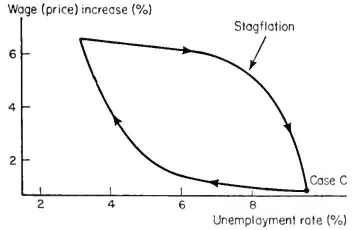
Since inflation in all three of these models is caused by aggregate excess demand, the indicated remedy is straightforward — reduce aggregate demand. This can be achieved by restrictive fiscal policy or restrictive monetary policy or both. Restrictive fiscal policy implies *either* a tax increase which reduces disposable income and therefore private demand *or* a decrease in government demand (spending) or both. Restrictive monetary policy typically results from the sale of US government securities. This action lowers bank reserves and contracts the money supply. As outlined above this diminished money stock reduces demand. While Keynesians are inclined to emphasize fiscal measures and Monetarists monetary policy, there is little disagreement about the appropriate action.

The Long-Lag Model (II)

A major problem with the traditional inflation model outlined is that it cannot explain the observed coexistence of high unemployment and high inflation. However, it is possible to adapt the labor excess demand model to account for and explain stagflation. Many labor contracts are negotiated for a three-year period. Thus, if an inflationary wage increase is agreed to in a tight labor market, it will remain in force two or three years later even if substantial unemployment obtains at that time. In this way inflation can persist into periods of high unemployment. When modified to take into account this behavior, the Phillips Curve of Chart 1 takes on the circular or hysteresis form of Chart 2. Given this long lag model, stagflation is necessarily a temporary phenomenon, which cannot persist for more than two or three years, the length of the standard labor contract.

The appropriate policy responses are again obvious. Restrictive fiscal and monetary policies must be employed to deliberately raise unemployment to the 5 to 6 percent level for a period of approximately two years. If the economy is already suffering substantial unemployment, the Administration must resist all temptations to stimulate the economy. This sustained unemployment whether deliberately induced or not is an extraordinarily high

Chart 2. The Long-Lag Phillips Curve



price (both economically and politically) to pay for eliminating inflation. Until recently most administrations have been very reluctant even to consider such restrictive measures.

Sectoral Excess Demand Inflation (III)

In the traditional inflation models outlined earlier price pressure arises when, because of an excessively optimistic outlook and/or excessively easy money, aggregate demand is raised above its normal full employment level and therefore exceeds full employment output. However, excess demand can also occur if demand remains at the normal full employment level, but for some reason there is a contraction in normal full employment output or supply. Recently such a contraction in output occurred in two important sectors of the economy — agriculture and petroleum. The agricultural shortfall was caused by bad weather first in the Soviet Union and then in the United States. The contraction in the supply of petroleum was manipulated first for political and then for economic reasons. Price increases in these two sectors can be transmitted to the rest of the economy in two ways. First, agricultural and petroleum products are inputs and therefore costs for a wide variety of goods. Given the pricing rules of many manufacturing and processing sectors, which are typically formulated in terms of a fixed markup on variable input costs, prices are raised accordingly. Second, increases in food prices are particularly visible and therefore are likely to generate compensatory wage increases which in turn raise the cost and price of most other products.

If inflation is induced in this way, that is, by a shortfall in supply, the appropriate response is clear — stimulate more production. In the case of agricultural shortages this implies opening up new acreage, imposing export controls, and praying and hoping for better weather. For petroleum and other raw material shortages, the indicated response requires exerting political and economic pressure to counteract the oligopolistic pricing and supply tactics of the petroleum and other mineral cartels. Policies directed at noncompetitive inflationary markups include government jaw boning, consumer resistance, and antitrust actions.

The Uneven Productivity Increase Model (IV)

In many sectors of the economy, particularly those involving manufacturing, annual technological advances make the individual worker more productive, enabling the firm to increase wages without raising prices. In other sectors of the economy, particularly labor intensive services such as hospitals, restaurants, banking and finance, education and much retailing, technological progress has been much slower or possibly absent. Consequently only limited wage increases can be made without raising the price of these services. To the extent that the *relative wage hypothesis* is operative and these service employees obtain wage increases comparable with those granted in manufacturing, inflationary pressures are introduced.

While this source of inflation cannot amount to much

more than 1 percent per year, it is particularly difficult to combat. Since the cause is the relatively low rate of productivity gain in some service sectors, the implied remedy is to somehow increase productivity in these same sectors. How this is best accomplished is an open question. A competitive market economy exerts some pressure on those sectors which are characterized by lagging productivity and higher costs. However, where payments are largely indirect as in education and health care services this leverage is greatly diminished. The contraction in real resources made available to education in recent years may be viewed as an attempt to increase productivity in this area. Similarly the Carter Administration's proposal to limit increases in hospital charges can be viewed as an attempt to stimulate productivity in the health care sector.

The Inflationary Expectations Model (V)

If an excess demand inflation continues for an extended period of time during which prices and wages both continue to rise at, for example, 6 percent per year, it is quite possible that people will come to expect this rate of inflation. If most of the population subscribes to this view, then this level of inflation can be *sustained* even in the absence of any excess demand in either the output or input (labor) markets. In particular, if prices are expected to rise by 6 percent next year, then wage and salary increases amounting to 6 percent will be negotiated in order to protect existing purchasing capability. Given this wage increase, producer costs will rise by 6 percent and prices will in turn be raised by 6 percent. As a consequence *the expected 6 percent price increase is automatically fulfilled*. There is now no reason to alter these expectations for the following year. Nor is there any economic reason for the employer to resist the demand for a 6 percent wage increase, since if all wages go up by 6 percent, money income rises by 6 percent and so raising prices by 6 percent will not mean any loss in sales or profits.

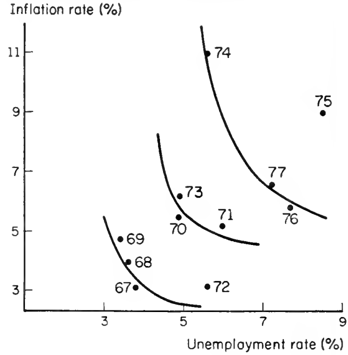
This line of argument which states that an expected inflation rate of 6 percent leads to behavior which automatically induces a 6 percent inflation holds equally well for any level of expected price inflation, be it 3 percent, 6 percent, or 9 percent. It is also important to note that

Table 1. Some Macroeconomic Indexes

Year	Inflation rate (CPI)	Unemployment rate	Growth of money stock	Interest rate (commercial paper)
1967	3.2	3.8	6.6	5.1
1968	4.0	3.6	7.8	5.9
1969	4.7	3.4	3.1	7.8
1970	5.5	4.9	5.4	7.9
1971	5.3	6.0	10.1	5.1
1972	3.3	5.6	4.5	4.7
1973	6.2	4.9	8.7	8.2
1974	11.0	5.6	5.8	10.1
1975	9.0	8.5	4.6	6.3
1976	5.8	7.7	4.2	5.3
1977*	6.6	7.2	6.3	4.9

* First half only.

Chart 3. The Shifting Phillips Curve



this phenomenon is essentially independent of the existing level of unemployment. Naturally, however, unusually high rates of unemployment will moderate the inflation rate somewhat and conversely a very tight labor market will cause the rate of inflation to escalate.

Put more formally the argument states that there is a separate Phillips Curve for each level of expected price inflation. This can be seen *in a very crude way* if we plot the rate of inflation against the rate of unemployment for the last decade. See Table 1 and Chart 3. The Phillips Curve appropriate to the period 1967–69 reflects an expected rate of inflation of approximately 2 to 3 percent.

This was the historical norm for the 1960s. The prolonged inflation induced by the excess demand associated with the Vietnam War raised the expected rate of inflation to approximately 4 to 5 percent. Consequently, the Phillips Curve shifted upwards in the period covering 1970–73. The agricultural shortages of 1973 and the petroleum crisis of 1974 further escalated the inflation rate. This generated a new higher expected inflation rate of 6 to 7 percent, which forms the basis for the Phillips Curve appropriate to the period 1974–77 (see Chart 3).

To the extent that this model is valid and that inflation results from self-fulfilling inflationary price expectations, it is obvious that policy measures must be directed at altering these price expectations. How can this be done? Recall that price increase expectations reflect the recent price increase history. Inflationary expectations of 6 to 7 percent derive from a 2 to 3 year history of 6 to 7 percent price and wage increases. A new less inflationary set of price expectations of 2 to 3 percent would require a 2 to 3 year history of price and wage increases of this magnitude, and this can be guaranteed only by *wage and/or price controls* of some sort.

The appropriate response, therefore, to an inflation

fueled by inflationary price expectations is not restrictive monetary or restrictive fiscal policy because these alter aggregate demand, and excess aggregate demand is not the posited cause of the inflation. Neither are export controls on agricultural products nor tax concessions to oil producers because sectoral supply shortages are not at issue. Nor are schemes to increase productivity in the lagging service sectors appropriate. At best all of these have only an indirect impact on price expectations. The only appropriate response to this type of inflation is a set of carefully designed wage and/or price controls because only they are directed at changing wage and price expectations.

The Current Situation

Which of the models outlined is most germane to the current situation and what policy recommendations follow? Perhaps these questions can best be answered by the process of elimination. Neither of the aggregate excess demand models ((I) and (II)) appears appropriate because neither is capable of explaining the persistence of inflation in the face of the extraordinarily high unemployment rates of the past three years. Consequently, restrictive monetary and restrictive fiscal policies do not appear to be indicated.

Variant (I(iii)) of these models which attributes excess demand inflation to an unwarranted growth of the money stock has received considerable public attention. Yet even a cursory examination of Table 1 reveals that there has been virtually no correlation between the rate of growth of the money stock and the rate of inflation over the past decade. Consequently, this candidate too must be excused along with the other excess demand inflation models.

The sectoral excess demand model (III) bears watching. However, the policies of the OPEC group have not been excessively inflationary over the past two years. Furthermore, the agricultural sector is currently characterized by surpluses rather than shortages. These surpluses have led to falling agricultural prices and a temporary lowering of the general inflation rate below the prevailing expected rate of inflation of 6 to 7 percent. Because food expenditures constitute a very significant fraction of total consumer expenditures, a continuing moderation in food price movements could lead to lower wage increases and a permanently lowered rate of inflation and expected inflation.

Still there are other sectors which could become inflationary and must be watched closely. Abroad there is continuing agitation for the formation of worldwide cartels to raise the price of certain primary metals and minerals. And at home the extraordinary rate of inflation in the housing sector could be transmitted to the overall economy unless it is moderated very shortly.

The uneven productivity gains model (IV) is, of course, appropriate, and as the relative size of the service sector grows it may become even more important. However, it is not capable of generating an overall annual inflation rate of much in excess of 1 percent. Furthermore there are no obvious policy responses.

This leaves the inflationary expectations model (V) as the only viable explanation of the current high (by historical standards) level of inflation. Wage settlements averaged approximately 8 percent during the first half of this year and this suggests the persistence of an underlying expected inflation rate of 6 to 7 percent.

As noted earlier, the indicated response to this inflation mechanism is the use of wage and/or price controls of some sort. However, even temporary controls are very controversial, primarily because they interfere directly with the normal allocative function of the market. Furthermore, this induced misallocation can be very substantial if the controls are not very carefully designed.

While it is clear from Chart 3 that the controls imposed in 1971–72 were effective in holding down inflation in those years, there is less agreement about the effectiveness of the controls in altering longer run inflationary expectations. Opponents of wage and price controls maintain that the controls of 1971–73 merely suppressed inflationary pressures temporarily and that inflationary expectations were not significantly altered. They cite as evidence the very high rates of price increase which followed the termination of controls in 1973. However, most economists attribute more of the high rate of inflation in 1973 and 1974 to the agricultural and petroleum crises and less to the suspension of price controls.

In conclusion, then, the most effective means for combating the current inflation appears to be the use of either direct wage and/or price controls or a combination of tax rewards and penalties designed specifically to induce noninflationary wage and price behavior. As noted, measures of this sort are very unpopular and whether they will actually be imposed depends in part on the moderating impact of the 1977 agricultural surpluses, but even more critically on the public's willingness to accept a continuing 6 to 7 percent rate of inflation and/or a long-term 6 to 7 percent rate of unemployment.

Local Illinois Developments

Agricultural News Roundup

The total labor force on US farms during July 1977 was down 7 percent from last year, according to the Crop Reporting Board of the US Department of Agriculture. Farm operators plus unpaid family members working 15 hours or more numbered 3,186,900, accounting for nearly two-thirds of the 5,045,500 farm labor force. Hired labor accounted for 1,858,600 workers, with field and livestock workers constituting 75 percent of total hired workers. The remaining hired workers consist of packinghouse employees, machine operators, maintenance and book-keeping, supervisors, and so on.

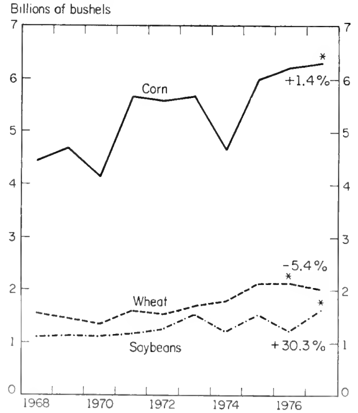
In Illinois the total labor force was estimated at 195,000, down one-half of 1 percent from a year ago. Family workers numbered 128,000 (66 percent) and hired workers numbered 67,000. Two states, Wisconsin and Minnesota, large in dairy production, exceeded Illinois in total labor in the Crop Reporting Board's Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin). The only other midwestern state with a larger total was Iowa with 268,000 workers, down 4.3 percent from last year.

On the basis of the October survey, the US Department of Agriculture Crop Reporting Board has predicted record harvests in both corn and soybeans in 1977. Corn is estimated at 6.3 billion bushels, surpassing last year's record of 6.2 billion bushels; soybeans are estimated at 1.65 billion bushels (see chart). The 1977 bumper wheat crop is the third largest wheat crop harvested in the US. Corn, as the leading US animal feed, is a key raw material for producing beef, pork, poultry, eggs, and milk for consumers. Soybeans provide high-protein meal to supplement feed, and oil for many food products.

The Illinois Cooperative Crop Reporting Service October forecast put corn production at 1,210 million bushels, 3 percent below last year and down 4 percent from the 1975 record harvest. Soybean production is forecast at 318.6 million bushels, up 32 percent from the previous record of 295.9 million bushels, also set in 1975.

In terms of cash receipts last year, Illinois was second only to California in the category of "all crops." Illinois led Iowa in corn and soybeans, the third and fourth largest commodities of the US, and followed Iowa in hog production, the fifth largest commodity of the US. Wheat, which neither Illinois nor Iowa produces in large quantities, was the sixth most important commodity in terms of cash receipts. Estimates of farm income statistics are on a calendar-year basis. Cash receipts from farm marketings constitute 91 percent of farm income, and thus provide a measure of both crop size and farm income.

US Crop Yields



Illinois Business Indexes

Item	Aug. 1977 (1967 =100)	Percentage change from	
		July 1977	Aug. 1976
Employment — manufacturing[1]	88.2[a]	+ 0.5	+ 1.1
Weekly earnings — manufacturing[1]	203.6[a]	+ 1.0	+ 9.1
Consumer prices in Chicago[2]	177.3	+ 0.5	+ 6.4
Life insurance sales (ordinary)[3]	242.1	+ 1.1	+23.8
Retail sales[4]	216.4[a, b]	− 3.3	+ 8.8
Farm prices[5]	181.0	− 6.2	− 9.5
Building permits — residential[4]	144.4	+15.6	+52.6
Coal production[6]	93.3	+36.4	+36.3
Petroleum production[7]	44.6	+ 2.5	− 1.5

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Ill. Dept. of Mines; [7] Ill. Geol. Survey.
[a] Preliminary. [b] Data for July 1977 compared with June 1977 and July 1976.

Comparative Economic Data for Selected Illinois Cities, August 1977

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS	$85,375[a]	3,727.3[a]	$37,995[a]	4,974	4.9
Percentage change from July 1977	+21.9	+1.2	+0.7	−0.2	
Percentage change from Aug. 1976	+38.2	+4.9	+3.2	−0.2	
NORTHERN ILLINOIS					
Chicago	$36,916	1,902.6	$28,849		
Percentage change from July 1977	+25.8	+3.9	+0.6		
Percentage change from Aug. 1976	+43.9	+3.3	+2.4		
Aurora	$ 5,438	119.5	$ 555		
Percentage change from July 1977	+66.9	−20.9	+27.5	3,231[b]	4.5[b]
Percentage change from Aug. 1976	+10.1	+18.1	+42.3	+3.4	
Elgin	$ 3,157	88.5	$ 565	−0.2	
Percentage change from July 1977	+110.4	+1.0	+15.7		
Percentage change from Aug. 1976	+170.0	+6.4	+53.9		
Joliet	$ 2,469	373.8	$ 285		
Percentage change from July 1977	−9.9	+0.6	+2.5		
Percentage change from Aug. 1976	−35.0	+10.3	−3.3		
Kankakee	$ 359	73.3[c]	$ 162	37[b]	6.8[b]
Percentage change from July 1977	−88.7	+4.1	−10.0	−1.2	
Percentage change from Aug. 1976	−15.9	+7.8	−16.9	n.a.	
Rock Island-Moline	$ 4,777	127.4[d]	$ 880	167[b]	3.9[b]
Percentage change from July 1977	+83.0	−6.8	+2.4	n.a.	
Percentage change from Aug. 1976	+2.4	−0.5	−7.0	−0.2	
Rockford	$ 3,561	159.7	$ 725	121[b]	6.8[b]
Percentage change from July 1977	+89.9	−0.6	+19.6	−3.8	
Percentage change from Aug. 1976	+163.3	−0.1	+8.2	−3.9	
CENTRAL ILLINOIS					
Bloomington-Normal	$ 4,718	55.6	$ 770	56[b]	3.1[b]
Percentage change from July 1977	+46.7	−4.1	+11.9	−1.3	
Percentage change from Aug. 1976	+148.4	+5.1	+8.7	−1.4	
Champaign-Urbana	$ 1,588	58.2	$ 596	69[b]	3.7[b]
Percentage change from July 1977	−14.1	+0.3	+7.1	−1.7	
Percentage change from Aug. 1976	−42.6	+2.6	+0.5	−1.8	
Danville	$ 906	48.8	$ 387	38[e]	6.8[e]
Percentage change from July 1977	−38.4	+9.6	+1.3	−5.2	
Percentage change from Aug. 1976	+63.5	+15.9	+18.3	n.a.	
Decatur	$ 4,746	114.6	$ 361	54[b]	6.3[b]
Percentage change from July 1977	−23.9	+0.1	−13.4	−1.9	
Percentage change from Aug. 1976	+45.8	−0.6	−5.9	−1.9	
Galesburg	$ 1,073	31.0[c]	$ 136	28[e]	8.4[e]
Percentage change from July 1977	+0.6	−4.6	−0.7	−3.8	
Percentage change from Aug. 1976	+60.3	−0.6	+0.0	n.a.	
Peoria	$ 7,759	198.1	$ 1,108	162[b]	5.0[b]
Percentage change from July 1977	+22.5	+7.2	+1.6	−0.9	
Percentage change from Aug. 1976	+57.2	+13.3	+1.1	−1.0	
Quincy	$ 897	47.0	$ 191	41[e]	6.7[e]
Percentage change from July 1977	+60.7	−1.0	+14.3	−3.8	
Percentage change from Aug. 1976	+34.6	+0.6	−10.7	n.a.	
Springfield	$ 5,475	131.9	$ 1,686	93[b]	4.5[b]
Percentage change from July 1977	+42.5	−14.3	−12.0	+4.9	
Percentage change from Aug. 1976	+76.2	+8.0	+2.5	+4.8	
SOUTHERN ILLINOIS					
East St. Louis	$ 229	32.0	$ 145		
Percentage change from July 1977	+218.0	+14.6	−2.0		
Percentage change from Aug. 1976	+56.8	−2.1	+1.3		
Alton	$ 183	89.1	$ 110	276[f]	6.1[f]
Percentage change from July 1977	+105.6	+8.5	+3.7	+14.8	
Percentage change from Aug. 1976	−39.6	−0.2	−5.1	n.a.	
Belleville	$ 794	38.0	$ 228		
Percentage change from July 1977	+135.6	+15.5	−3.3		
Percentage change from Aug. 1976	−0.8	+16.5	−6.1		
Carbondale-Murphysboro	$ 330	38.2	$ 256	26[e]	7.5[e]
Percentage change from July 1977	−25.0	+2.9	−6.9	−1.5	
Percentage change from Aug. 1976	−49.9	+12.0	+11.3	n.a.	

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 9 September 1977. [4] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Data are for standard metropolitan statistical areas. [c] Includes immediately surrounding territory. [d] Includes East Moline. [e] Labor market area. [f] Madison, St. Clair, Monroe, and Clinton counties. n.a. Not available.

The Economic Impact of the University of Illinois on the State of Illinois

DIANE M. CHICOINE, GARY A. SILBERT, AND GEOFFREY J. D. HEWINGS

In an era of high unemployment and slowly rising state revenues, the allocation of state funds to all forms of activity is being subjected to close scrutiny. The state-supported institutions of higher education have not escaped the pressures of more demanding evaluative processes, even though the nature of these institutions precludes comprehensive measurements of the benefits derived by the State from the expenditure of its dollars. All too often, however, one perceives the notion of universities as "sinkholes" for precious state dollars. Ignored in these evaluations are the substantial benefits of research undertaken in these institutions and even the obvious (yet often overlooked) impacts generated upon the state's economy through purchases of goods and services by the university and expenditures of wages and salaries by academic and nonacademic staff.

In this analysis, the impact of the University of Illinois system (Urbana-Champaign, Chicago Circle, and Medical Center) on the State is evaluated using data for fiscal year 1975. The analysis does not include the impact generated through the expenditures of students attending the University; it is hoped that these additional impacts can be evaluated in the near future.

Model Used

Impact analysis can be undertaken in a variety of ways. The choice of model depends, to a large extent, upon the nature of the problem and the resources available for data collection. Since an analysis of sector-by-sector impacts was desired, an input-output model was used in this study. In this way, direct, indirect, and induced impacts could be evaluated. The direct impacts are simply the expenditures by the University system on goods and services and on wages and salaries. The indirect impacts may be thought of as the activity generated by the direct expenditures. For example, a University purchase of steel bookcases will result in a *direct* impact upon the manufacturer of these cases and an *indirect* impact on iron and steel producers (providing steel for the bookcase manufacturer), on the coal industry (providing coal to the iron and steel producers), and so forth.

Tracing the indirect impacts could be tedious without the use of the input-output model. This model details transactions between two major sets of activities: intermediate and final demand. The former is composed of a set of industrial and commercial activities. The model provides information on the sales and purchases relationships between industrial and commercial firms and thus enables the analyst to examine the probable impacts that changes in activity levels in one sector will have on all other sectors. The model is driven by the second set of activities, final demand. These sectors usually comprise government activity, investment, and personal consumption expenditures. Included in government would be the University system. Hence, one is able to trace through the model the impacts of University expenditures. Reference to the accompanying diagram will assist the explanation.

University expenditures may be divided into two major categories: (1) goods and services and (2) wages and salaries. The division is important, since these two categories will provide different statewide impacts. Consider first the impacts generated by purchases of goods and services (arrow 1). As in the example of the bookcase impact described earlier, the direct expenditures will lead to increased demands upon those industries (arrow 2). To meet these demands, industrial output will have to increase (arrow 3). The cumulative effect of several rounds of spending will be for the University dollar of direct purchases to have been multiplied as much as 1.5 to 2.5 times in aggregate. The impact upon specific industries will vary considerably. One of the most fascinating aspects of the input-output model is the fact that one is able to identify industries indirectly linked to University expenditures. The impact upon the coal industry is but one example. Another would be the impact upon textile firms producing upholstery for automobiles purchased for use by the University car pool. Some of these indirect impacts are very small; others yield impacts that are often larger than the impacts on firms from which the University makes direct purchases.

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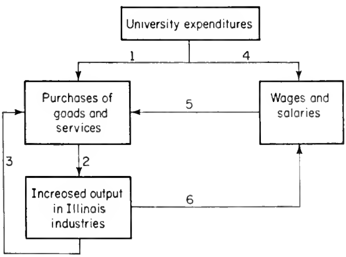
The second part of the University-generated impact occurs in two ways. Most directly, the wages and salaries paid to employees are spent, for the most part, within the State and these expenditures create demands for goods and services (arrows 4 and 5) in much the same way as that generated by the direct purchases impact of the University expenditures in goods and services. In addition, the direct and indirect output generated by the combined University expenditures will generate wages and salaries to employees of supplying firms. The expenditures of these wages and salaries will, in turn, generate a further set of impacts (arrow 6). Hence, the "ripple" or multiplier effects can work in many ways; a number of them are provided in what follows.

Data

Since a survey-based input-output model for the State of Illinois was not available, the 1967 US model was used with suitable modification. First, the 368 sectors were collapsed to 73 (shown in Table 1). Sector 74 represents households; by including this sector, we are able to trace the impacts suggested by arrows 5 and 6 in the diagram. The sectors are arranged as rows and columns of a square matrix; each row shows the disposition of industry sales to all other industries. Each column shows the sectoral origin of purchases by each industry. For the households row, each entry represents wages and income value-added or payments to household by each industry. The household column is, in essence, a disaggregated vector of average propensities to consume.

Since the Illinois economy is very open (a large number of transactions are made between firms in the State and firms outside the State), the national linkages between industries had to be adjusted to compensate for these imports and exports. This was accomplished through the development of a proportionality vector using location quotients. In effect, the relative importance of each industry in the State was compared with the similar industry in the nation. As the proportions approached each other, the greater was the similarity between Illinois and US industries. For industries poorly represented in the State, a high degree of importation of their products was suggested.



University expenditure data were collected for all three campuses. Inasmuch as the number of individual purchases was very large (46,000 for Champaign-Urbana alone), the following sampling procedure was followed. Eighty-five percent of all orders over $2,500 were sampled; only 1 percent of those orders under $2,500 were examined. Attempts were made, through addresses, the *Illinois Manufacturers Directory,* and other documents, to locate the place of business in the US. Only those firms located in the State were included in the analysis. The expenditures of students, the Athletic Association, and the University of Illinois Foundation were not estimated. Furthermore, all wages and salaries were assumed to accrue to Illinois residents. Trade margins were applied to the data, since the input-output model operates on the basis of producers' prices. These margins were added to the wholesale and retail trade sectors.

Analysis

In the first part of the analysis, the impact of the expenditure of $56.4 million by the University on goods and services produced by Illinois firms was shown to have generated $75.74 million worth of output in the State. Thus, each University dollar of expenditure creates an additional 34 cents worth of activity. The direct and indirect impacts together create more than 3,700 jobs in the State. These estimates were obtained from a vector of employment/output ratios derived in part from Census data, *County Business Patterns,* and BEA data. The sector-by-sector impacts are shown in the first four columns of Table 2. Of the nonservice sectors, construction (sector 8), chemical products (sector 24), cement, clay, and concrete products (sector 28), and medical and photographic equipment (sectors 59 and 60) benefited the most from the University. The largest impact was felt in the trade sector — reflecting both direct purchases of food and other items and indirect purchases through manufacturing wholesalers. Not unexpectedly, the utility sector (67) was also a major provider of services.

When the impacts of wages and salary expenditures are included, $346.5 million worth of University expenditure generated $1,801 million. In addition, 73,824 jobs were shown to be derived from these expenditures. Once again, the major impacts occur in the service sectors — in particular, the finance, insurance, real estate, and local transportation sector (72) and wholesale and retail trade (sector 68). Together, these sectors account for almost 20 percent of the generated output and just under 48 percent of the employment impacts.

In evaluating the results, it should be noted that the estimate of the proportion of consumer expenditures made in Illinois is extremely critical. This is not unexpected given the dominance of wages and salary expenditure in the University vector. For the analysis reported here, it was estimated that 80 percent of wages and salary was spent, in the first instance, in Illinois. A change of 5 percentage points in this estimate would cause a $95 million change in total output generated and approximately 4,000 in the labor force. In reality, one would require a separate estimate of the proportion of consumers' expenditures made from each sector in Illinois. For some sec-

Table 1. Sector Classification and Direct Allocation of University Expenditures

Sector number	Percentage of University expenditures	Sector description
1	.1629	Agriculture, forestry, and fisheries
2	.00	Iron ore mining
3	.00	Copper ore mining
4	.00	Other nonferrous metal ore mining
5	.00	Coal mining
6	.00	Stone and clay mining and quarrying
7	.00	Chemical and fertilizer mining
8	2.6278	New construction
9	.00	Guided missiles and space vehicles
10	.5965	Ordnance, various heavy machinery, and some specialized equipment
11	.5357	Food products
12	.00	Tobacco manufacturing
13	.00	Broad and narrow fabrics, yarn and thread mills
14	.0027	Miscellaneous textiles and floor coverings
15	.00	Hosiery and knit goods
16	.00	Apparel
17	.0025	Miscellaneous fabricated textile products
18	.0124	Logging, millwork, misc. wood products, and household furniture
19	.0537	Other furniture
20	.1351	Paper products
21	.00	Paperboard
22	.0449	Publishing
23	.1083	Printing
24	.0042	Chemical products, petroleum, leather, and machine shop products
25	.00	Synthetic fibers
26	.1389	Drugs
27	.0010	Glass
28	2.0162	Cement, clay, and concrete products
29	.00	Blast furnaces and basic steel products
30	.00	Iron and steel foundries, forgings, and misc. products
31	.00	Primary copper metals
32	.00	Primary aluminum
33	.00	Other primary nonferrous metal and secondary nonferrous metal
34	.00	Copper rolling and drawing
35	.00	Aluminum rolling and drawing
36	.00	Other nonferrous rolling and drawing
37	.00	Miscellaneous nonferrous metal products
38	.00	Metal containers
39	.00	Heating and plumbing fixtures, household goods, and service industry machines
40	.0027	Fabricated structural metal
41	.0028	Screw machine products
42	.00	Engines, turbines and generators
43	.0049	Material handling equipment
44	.00	Metal working machinery
45	.00	Special industry machinery
46	.0035	General industrial machinery
47	.2902	Computers and peripheral equipment
48	.0146	Typewriters and other office machines
49	.0064	Electrical industrial apparatus
50	.0288	Electric lighting and wiring
51	.00	Radio and television receiving sets
52	.00	Telephone and telegraph apparatus
53	.0199	Electronic components
54	.00	Miscellaneous electrical machinery
55	.00	Aircraft
56	.00	Motor vehicles
57	.00	Ship and boat building and repair
58	.0371	Electrical transmission equipment & professional and scientific equipment
59	.7035	Medical and dental instruments
60	.3214	Photographic equipment and supplies
61	.00	Miscellaneous manufactured products
62	.00	Water transportation
63	.00	Air transportation
64	.0018	Rail, truck, and other transportation
65	1.3669	Communications, except radio and television broadcasting
66	.00	Radio and television broadcasting
67	1.6377	Electric and gas utilities, and water and sanitary services
68	3.7470	Wholesale and retail trade
69	.00	Insurance
70	.0789	Advertising
71	.00	Hospitals
72	1.5856	Finance, local highway transportation, and other misc. services
73	.00	Owner-occupied dwellings
74	83.7036	Households

Table 2. Impact of University Expenditures

Sector number	Goods and Services Expenditures Impact: Generated output ($ millions)	Percentage of total	Generated employment	Percentage of total	Goods, Services, Wages and Salary Expenditures Impact: Generated output ($ millions)	Percentage of total	Generated employment	Percentage of total
1	1.12	1.47	2.1	0.05	140.77	7.81	267.48	0.36
2	0.07	0.09	7.25	0.19	7.50	0.41	749.41	1.01
3	0.02	0.03	2.64	0.07	0.39	0.02	39.14	0.05
4	0.03	0.04	3.50	0.09	2.09	0.11	209.70	0.28
5	0.29	0.39	7.30	0.19	2.91	0.16	71.98	0.09
6	0.75	0.99	19.58	0.52	2.29	0.12	59.53	0.08
7	0.26	0.03	2.66	0.07	0.63	0.03	62.98	0.08
8	9.15	12.08	401.06	10.72	32.70	1.81	1432.58	1.94
9	0	0	0	0	0.13	0.01	1.40	0.01
10	2.53	3.34	48.21	1.28	21.15	1.17	401.95	0.54
11	1.90	2.51	23.61	0.63	34.66	1.93	432.34	0.58
12	0	0	0	0	1.05	0.05	9.78	0.01
13	0.25	0.33	8.86	0.23	64.18	3.56	2265.55	3.06
14	0.09	0.13	1.95	0.05	13.21	0.73	260.29	0.35
15	...[a]	0.01	0.30	0.01	1.44	0.08	50.06	0.06
16	0.03	0.05	1.64	0.04	4.71	0.26	202.29	0.27
17	0.03	0.04	1.10	0.02	51.05	2.83	1623.40	2.19
18	0.84	1.11	27.94	0.74	23.81	1.32	788.23	1.06
19	0.17	0.22	4.59	0.12	7.27	0.40	192.15	0.26
20	1.03	1.36	28.67	0.76	16.74	0.92	463.70	0.62
21	0.23	0.31	6.49	0.17	10.45	0.58	286.40	0.38
22	0.16	0.22	4.41	0.11	8.22	0.45	217.14	0.29
23	0.43	0.57	23.01	0.61	11.32	0.62	602.52	0.81
24	3.33	4.40	70.07	1.87	119.91	6.65	2518.31	3.41
25	0.03	0.04	0.38	0.01	9.02	0.50	90.23	0.12
26	0.48	0.64	10.64	0.28	2.81	0.15	61.74	0.08
27	0.12	0.15	5.13	0.13	14.89	0.82	635.96	0.86
28	8.05	10.63	224.82	6.00	5.11	0.28	142.80	0.19
29	1.04	1.38	28.10	0.75	12.79	0.71	343.00	0.46
30	0.22	0.30	9.90	0.26	3.56	0.19	155.21	0.21
31	0.10	0.13	0.67	0.01	1.39	0.07	8.94	0.01
32	0.07	0.09	0.76	0.02	1.48	0.08	14.90	0.02
33	0.11	0.15	1.44	0.03	2.06	0.11	25.15	0.03
34	0.10	0.14	0.74	0.01	1.57	0.08	10.87	0.01
35	0.09	0.12	1.15	0.03	1.98	0.11	25.01	0.03
36	0.30	0.39	6.96	0.16	2.80	0.15	64.46	0.08
37	0.06	0.08	3.14	0.08	1.81	0.10	88.68	0.12
38	0.09	0.12	2.07	0.05	2.08	0.11	45.84	[illegible]
39	0.25	0.33	6.33	0.16	14.44	0.80	362.54	0.49
40	0.72	0.95	18.44	0.49	3.34	0.18	85.37	0.11
41	0.22	0.30	5.65	0.15	6.97	0.38	171.51	0.23
42	0.07	0.09	1.65	0.04	1.33	0.07	31.40	0.04
43	0.08	0.10	2.81	0.07	0.41	0.02	14.21	0.01
44	0.11	0.14	4.19	0.11	3.18	0.17	119.20	0.16
45	0.01	0.02	0.61	0.01	1.17	0.06	43.94	0.05
46	0.18	0.24	5.23	0.13	2.67	0.14	74.02	0.10
47	0.08	0.11	2.44	0.06	0.42	0.02	12.20	0.01
48	0.05	0.06	1.26	0.03	0.40	0.02	10.03	0.01
49	0.10	0.13	4.25	0.11	2.35	0.13	96.04	0.13
50	0.26	0.34	11.28	0.30	3.56	0.19	152.12	0.20
51	...[a]	0	0.08	0	0.94	0.05	16.20	0.02
52	0.05	0.07	2.11	0.05	13.04	0.72	495.77	0.67
53	0.24	0.32	10.97	0.29	4.36	0.24	195.65	0.26
54	0.04	0.05	1.24	0.03	3.28	0.18	100.46	0.13
55	0.09	0.12	1.28	0.03	5.47	0.30	73.39	0.09
56	...[a]	0	0.16	0.01	63.63	3.53	6356.86	8.61
57	...[a]	0.01	0.36	0.01	0.45	0.02	27.29	0.03
58	0.30	0.40	11.42	0.30	4.82	0.26	180.82	0.24
59	2.12	2.80	50.79	1.35	0.96	0.05	23.05	0.03
60	1.03	1.36	30.16	0.80	1.96	0.10	57.50	0.07
61	0.09	0.12	3.31	0.08	19.88	1.10	676.18	0.91
62	0.09	0.13	4.56	0.12	11.45	0.63	525.72	0.71
63	0.02	0.03	0.61	0.01	11.26	0.62	295.15	0.39
64	1.55	2.04	89.90	2.40	43.25	2.40	2504.24	3.39
65	4.25	5.61	147.09	3.93	15.44	0.85	534.43	0.72
66	...[a]	0	0.03	0	0.30	0.01	12.51	0.01
67	6.67	8.80	101.39	2.71	65.11	3.61	989.79	1.34
68	12.48	16.48	1256.22	33.58	119.87	6.65	12059.89	16.33
69	0.42	0.56	24.84	0.66	64.74	3.59	3781.01	5.12
70	1.15	1.52	8.99	0.24	26.85	1.49	209.47	0.28
71	0.02	0.03	4.48	0.11	10.12	1.56	1620.05	2.19
72	9.34	12.34	933.94	24.96	230.04	12.77	22981.47	31.12
73	0	0	0	0	158.81	8.81	1588.14	2.15
74	...[b]	...[b]	...[b]	...[b]	242.58	13.46	2425.81	3.28

[a] Less than $10,000.

[b] Not calculated for goods and services expenditures impact.

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tors, the value may be 100 percent — for others, closer to 20 percent. In the absence of better information, a value of 80 percent was used for all sectors.

Conclusions

It would be erroneous to make too liberal an interpretation of these data. Given the nonsurvey nature of the input-output model, the impact data are estimates rather than actually observed values. However, the estimates appear to conform, in an order of magnitude sense, to estimates performed for other institutions. To provide some basis for comparison, 1972 nonfarm employment in Champaign County was estimated by BEA to be 65,000, of which approximately 10,000 were employed on the Urbana-Champaign campus of the University. The total employment generated by University expenditures is estimated to be somewhat larger than total nonfarm employment for Champaign County and approximately 1 percent of total state employment.

While one has no wish to see institutions of higher education judged on the basis of their contribution to gross state income, product, and employment accounts, it is clear that University expenditures do contribute significantly to these aspects of the state's economy.

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Employment in Illinois, 1970–75

RUTH A. BIRDZELL

Total employment in Illinois has increased only slightly since 1970. Employment in 1975 has been estimated at 5,038,518 by the US Department of Commerce Bureau of Economic Analysis. The pattern of employment in the State in the first half of the 1970s indicated decreases in 1971 and 1972, increases in 1973 and 1974, and a reduction again in 1975. The 1975 level showed a net advance of 1 percent over 1970. Employment in the nation as a whole, in contrast, rose fairly steadily from 1970 to 1974, then dropped in 1975. With a 1.7 percent decline in 1975 partly offsetting the 8.3 percent rise from 1970 to 1974, the net growth for the five-year period was 6.4 percent. Thus employment is plainly expanding much more slowly in Illinois than in the US.

The biggest difference between Illinois and the US clearly comes in wage and salary employment, especially in the manufacturing sector of private nonfarm work. The 1970–75 percentage changes were as follows:

	US	Illinois
Wage and salary employment	+6.7	+ 0.6
Private nonfarm	+5.6	− 1.1
Manufacturing	−5.6	−10.0

In the nation, the increase in jobs in the trade, finance-insurance-real estate, and services sectors was nearly four times as great as the loss in manufacturing. The expansions in trade and services were particularly strong. In Illinois, however, though all three sectors added jobs, the total number of new jobs was still below the number of job losses in manufacturing.

The public portion of nonfarm wage and salary employment grew substantially both in Illinois (8.9 percent) and the US (10.9 percent) between 1970 and 1975. In both cases most of the additional jobs appeared at the state and local levels. Federal employment dropped in the State and in the nation as military cuts considerably exceeded changes in civilian employment.

In the agricultural sector, wage and salary employment rose in every region of the State between 1970 and 1975. Notwithstanding a 31.4 percent increase for the State, paid agricultural employment (at 33,873) accounted for less than 1 percent of total wage and salary employment. In contrast, the number of farm proprietors fell in every region over the five-year period, declining 3.5 percent in the State. The opposite shifts in the two components left farm employment at 3.4 percent of total employment. Farm employment declined slightly in the nation between 1970 and 1975 to 4.7 percent of total employment.

Farm labor as a share of total employment varied from 0.1 percent in Region I (Chicago) to 17.6 percent in Region XIV (Harrisburg). Farm employment also accounted for 16 or 17 percent of total employment in Regions X (Quincy), XI (Effingham), and XII (Jerseyville-Mt. Vernon).

Employment in Illinois Regions

The two regions in Illinois which suffered most in the drop in total employment in the early 1970s were Regions I and XIII (Alton-East St. Louis). (See the accompanying chart.) Our Region I includes only Cook and Du Page counties, and a look at the two counties shows that the employment decline occurred wholly in Cook County. In Du Page there was an increase of 31.5 percent. The contrast within Region I and a comparison of that area with its satellite area, Region II (Aurora), indicates a shift of employment from the central area to

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Data used for this article were compiled by the US Department of Commerce Bureau of Economic Analysis with the cooperation of the Illinois Bureau of Employment Security.

Leading Indicators: Abused or Overused? *By Charles W. Wiley / Page 10*

the suburban areas. This is in keeping with the widespread view that job locations and the population shift from the central cities to the suburbs are related.

In the Alton-East St. Louis region the pattern was not so clear cut. Of the two central counties, Madison lost ground between 1970 and 1975 but St. Clair gained. Of the "suburban" counties, Bond gained but Clinton, Monroe, and Washington lost a little.

The pattern of changes in wage and salary employment very closely follows that of total employment. When private nonfarm employment is considered, however, the picture is less favorable. Regions I and XIII showed losses of 3.7 percent and 3.5 percent, respectively; Region XV (Carbondale) had a loss of 4.5 percent; and Regions III, IV (Rockford), and XIV also suffered small declines of less than 1 percent in wage and salary employment.

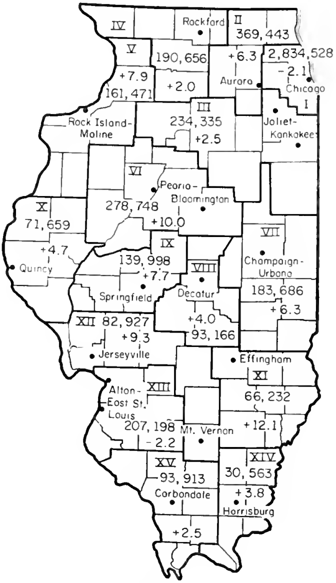
Regional Comparisons

With 53 percent of the estimated Illinois population in 1975, the two-county Chicago area accounted for 56.3 percent of total employment and 59.1 percent of nonfarm wage and salary employment in the State. In private nonfarm wage and salary employment (that is, excluding such employment by government units), Region I accounted for percentages ranging from 58.5 for manufacturing to 73.2 for the finance-insurance-real estate sector. The Aurora region was usually second, followed by the Peoria-Bloomington region (VI) and the Joliet-Kankakee region.

For government employment, the Chicago region's share of the total was about 45 percent. Region II's share was noticeably larger than in other cases, mostly because of a one-fourth share of federal government employment. The third rank was held by the Champaign-Urbana region (VII) for the total and for federal employment and by the Joliet-Kankakee region for state-local government employment.

Wage and salary employment constituted considerably different percentages of total employment in the various regions — ranging from a low of 70.4 percent in the Harrisburg region to 94.4 percent in the Chicago region. This means that in the Harrisburg region, proprietors accounted for almost 30 percent of total em-

Employment in Illinois Regions, 1975, and Percentage Changes, 1970 to 1975



Bureau of Economic and Business Research

ployment, compared with less than 6 percent in the Chicago region. Comparing 1975 with 1970, wage and salary jobs had increased in importance in 10 regions, decreased in 3, and remained unchanged in 2 regions.

Nonfarm wage and salary employment had a smaller share of the total in seven regions in 1975, a larger share in eight regions. Most of the shifts amounted to less than 1 percentage point, but in the Effingham region the change was from 69.5 percent of the total in 1970 to 72.1 percent in 1975.

Private nonfarm employment accounted for a smaller portion of the total in 1975 in all but two regions (Aurora and Effingham). The largest share drop was from 56.5 percent to 52.7 percent in the Carbondale region, but five other regions had sizable declines in the share of such employment. Manufacturing jobs fell in importance in all but two regions. Trade was more important in nearly all regions as a source of jobs, as were the service industries and to a lesser extent the finance-insurance-real estate group. In most areas, manufacturing ranks as the largest source of private nonfarm employment, followed by trade and services.

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Employment by Type and Major Industrial Sources, Illinois Counties, 1975

County	Total employment	Number of proprietors	Wage and salary employment: Total	Farm	Nonfarm: Total	Government	Private nonfarm: Total	Manufacturing	Trans., comm., and public utilities	Trade	Services	All other[a]
Illinois	5,038,518	479,004	4,559,514	33,873	4,525,641	761,252	3,764,389	1,214,510	276,024	985,936	823,123	464,796
Adams	34,637	5,204	29,433	366	29,067	3,601	25,466	9,956	1,397	6,653	5,384	2,076
Alexander	4,492	881	3,611	77	3,534	701	2,833	1,006	291	821	539	176
Bond	5,195	1,757	3,438	127	3,311	655	2,656	527	156	787	1,017	169
Boone	14,526	1,531	12,995	217	12,778	1,315	11,463	8,139	409	1,170	1,083	662
Brown	2,276	1,093	1,183	92	1,091	316	775	20	63	(D)	(D)	692[b]
Bureau	14,716	4,473	10,243	415	9,828	2,628	7,200	2,502	404	1,973	1,356	965
Calhoun	2,180	1,112	1,068	146	922	357	565	14	(D)	227	230	94[b]
Carroll	8,018	2,414	5,604	288	5,316	2,046	3,270	636	624	1,004	673	333
Cass	6,180	1,639	4,541	249	4,292	955	3,337	1,314	442	866	447	268
Champaign	77,985	7,241	70,744	520	70,224	32,323	37,901	6,264	2,450	14,121	10,357	4,709
Christian	13,865	3,288	10,577	720	9,857	1,945	7,912	1,710	600	2,244	1,709	1,649
Clark	6,692	2,416	4,276	185	4,091	1,012	3,079	(D)	267	988	525	1,299[b]
Clay	5,901	2,039	3,862	95	3,767	1,112	2,655	887	197	755	338	478
Clinton	10,134	2,670	7,464	181	7,283	2,399	4,884	837	459	1,402	1,565	621
Coles	21,564	3,108	18,456	268	18,188	4,471	13,717	4,760	1,384	3,719	2,460	1,394
Cook	2,641,655	144,067	2,497,588	1,437	2,496,151	320,029	2,176,122	674,304	170,549	568,433	492,970	269,866
Crawford	9,128	2,021	7,107	161	6,946	1,134	5,812	2,580	363	1,266	627	976
Cumberland	3,764	1,622	2,142	123	2,019	562	1,457	364	50	541	415	87
De Kalb	29,147	4,004	25,143	702	24,441	7,862	16,579	6,985	688	5,078	2,255	1,573
De Witt	6,431	1,868	4,563	193	4,370	1,111	3,259	650	522	1,184	576	327
Douglas	8,578	1,855	6,723	279	6,444	1,162	5,282	1,520	497	1,349	611	1,305
Du Page	192,868	13,632	179,236	943	178,293	22,534	155,759	36,709	8,693	51,857	38,201	20,299
Edgar	8,945	2,641	6,304	397	5,907	1,171	4,736	2,036	281	1,236	845	338
Edwards	3,315	1,120	2,195	74	2,121	338	1,783	1,030	111	345	165	132
Effingham	14,264	2,846	11,418	194	11,224	1,706	9,518	3,313	596	2,716	1,994	899
Fayette	8,522	3,031	5,491	249	5,242	1,745	3,497	1,088	223	1,131	589	466
Ford	7,116	2,016	5,100	267	4,833	1,263	3,570	1,164	244	999	763	400
Franklin	11,184	2,915	8,269	93	8,176	2,185	5,991	490	474	1,478	1,291	2,258
Fulton	15,940	3,949	11,991	353	11,638	2,721	8,917	2,617	413	2,143	1,857	1,887
Gallatin	3,052	900	2,152	139	2,013	388	1,625	263	(D)	373	136	853[b]
Greene	5,876	2,277	3,599	421	3,178	948	2,230	397	293	744	564	232
Grundy	10,819	1,996	8,823	156	8,667	1,480	7,187	2,430	899	2,145	(D)	1,713[b]
Hamilton	2,961	1,492	1,469	70	1,399	582	817	226	77	259	135	120
Hancock	9,177	3,404	5,773	299	5,474	1,508	3,966	1,188	295	997	994	492
Hardin	1,765	492	1,273	28	1,245	346	899	27	91	(D)	(D)	781[b]
Henderson	2,338	1,106	1,232	250	982	421	561	(D)	57	242	129	133[b]

Employment by Type and Major Industrial Sources, Illinois Counties, 1975

County	Total employment	Number of proprietors	Wage and salary employment									
			Total	Farm	Nonfarm							
					Total	Government	Private nonfarm					
							Total	Manufacturing	Trans., comm., and public utilities	Trade	Services	All other[a]
Henry	19,599	4,888	14,711	498	14,213	3,036	11,177	3,159	885	3,607	1,962	1,564
Iroquois	12,924	4,634	8,290	542	7,748	1,957	5,791	1,888	254	1,870	(D)	1,779[b]
Jackson	25,595	2,954	22,641	345	22,296	10,586	11,710	1,680	1,022	4,062	3,387	1,559
Jasper	4,630	1,966	2,664	120	2,544	603	1,941	595	90	551	234	471
Jefferson	15,261	2,953	12,308	161	12,147	2,033	10,114	1,487	737	2,414	2,322	3,154
Jersey	5,456	1,547	3,909	244	3,665	1,240	2,425	363	198	836	834	194
Jo Daviess	8,020	2,965	5,055	294	4,761	1,188	3,573	1,327	210	992	608	436
Johnson	2,546	1,029	1,517	94	1,423	595	828	131	67	323	153	154
Kane	113,338	8,455	104,883	1,009	103,874	17,556	86,318	34,506	3,646	21,748	18,545	7,873
Kankakee	42,986	4,529	38,457	704	37,753	10,290	27,463	10,361	1,463	7,069	6,045	2,525
Kendall	15,476	1,551	13,925	340	13,585	1,390	12,195	9,433	189	1,095	1,095	383
Knox	30,163	3,958	26,205	419	25,786	5,199	20,587	8,506	1,859	5,002	3,372	1,848
Lake	169,337	12,189	157,148	922	156,226	49,898	106,328	39,731	4,323	27,319	23,031	11,924
La Salle	47,820	7,680	40,140	587	39,553	5,402	34,151	14,569	2,214	8,588	5,725	3,055
Lawrence	6,381	1,481	4,900	150	4,750	1,018	3,732	973	177	799	(D)	1,783[b]
Lee	15,780	3,236	12,544	294	12,250	5,122	7,128	2,035	573	1,951	1,739	830
Livingston	17,412	4,545	12,867	472	12,395	3,549	8,846	2,628	466	2,444	1,921	1,387
Logan	14,998	2,906	12,092	375	11,717	4,341	7,376	2,190	447	2,003	2,111	625
McDonough	14,447	3,319	11,128	298	10,830	3,709	7,121	1,933	355	2,894	1,263	676
McHenry	42,145	5,765	36,380	1,042	35,338	4,923	30,415	14,715	1,085	6,832	4,719	3,064
McLean	52,353	6,756	45,597	815	44,782	8,637	36,145	6,963	3,013	9,891	8,042	8,236
Macon	60,414	5,201	55,213	360	54,853	6,309	48,544	19,312	3,930	10,485	9,792	5,025
Macoupin	15,160	4,678	10,482	415	10,067	2,667	7,400	1,063	555	2,469	1,723	1,590
Madison	90,991	9,283	81,708	393	81,315	12,459	68,856	28,144	4,899	14,472	(D)	21,341[b]
Marion	17,539	3,675	13,864	173	13,691	2,532	11,159	2,997	1,311	2,840	2,378	1,633
Marshall	4,660	1,554	3,106	276	2,830	664	2,166	673	125	746	335	287
Mason	5,983	1,843	4,140	261	3,879	1,294	2,585	611	206	1,008	421	339
Massac	5,098	1,309	3,789	68	3,721	1,016	2,705	972	551	543	407	232
Menard	3,509	1,205	2,304	229	2,075	755	1,320	209	(D)	434	336	341[b]
Mercer	5,473	2,313	3,160	304	2,856	1,304	1,552	147	174	692	324	215
Monroe	4,850	1,718	3,132	205	2,927	710	2,217	78	227	809	544	559
Montgomery	12,933	3,673	9,260	283	8,977	1,605	7,372	1,863	647	2,294	1,346	1,222
Morgan	18,898	2,969	15,929	368	15,561	4,643	10,918	3,242	852	2,764	2,696	1,364
Moultrie	5,097	1,623	3,474	157	3,317	694	2,623	862	(D)	770	577	414[b]
Ogle	18,290	3,903	14,387	952	13,435	2,523	10,912	5,848	334	2,619	1,388	723
Peoria	101,821	7,983	93,838	386	93,452	12,649	80,803	22,236	4,929	23,093	19,936	10,609

Employment by Type and Major Industrial Sources, Illinois Counties, 1975

County	Total employment	Number of proprietors	Wage and salary employment									
			Total	Farm	Nonfarm							
					Total	Government	Private nonfarm					
							Total	Manufacturing	Trans., comm., and public utilities	Trade	Services	All other[a]
Perry	8,560	1,962	6,598	122	6,476	1,154	5,322	1,584	240	758	811	1,929
Piatt	6,184	1,826	4,358	333	4,025	1,284	2,741	540	230	866	745	360
Pike	7,878	3,130	4,748	631	4,117	1,215	2,902	571	256	945	743	387
Pope	1,083	560	523	67	456	252	204	(D)	10	62	103	29[b]
Pulaski	3,115	768	2,347	95	2,252	636	1,616	201	113	242	976	84
Putnam	2,327	566	1,761	100	1,661	388	1,273	743	108	187	85	150
Randolph	14,010	3,101	10,909	237	10,672	2,703	7,969	3,169	842	1,456	1,132	1,370
Richland	8,741	1,937	6,804	84	6,720	1,650	5,070	(D)	393	1,129	780	2,768[b]
Rock Island	90,003	5,879	84,124	218	83,906	20,501	63,405	26,801	4,216	16,168	10,450	5,770
St. Clair	90,593	8,801	81,792	388	81,404	20,999	60,405	11,060	7,037	16,375	(D)	25,933[b]
Saline	9,489	2,094	7,395	115	7,280	1,997	5,283	(D)	497	1,597	1,303	1,886[b]
Sangamon	93,823	7,969	85,854	1,022	84,832	27,038	57,794	9,043	(D)	15,234	17,867	15,650[b]
Schuyler	3,244	1,367	1,877	204	1,673	684	989	69	36	455	255	174
Scott	2,590	926	1,664	177	1,487	452	1,035	98	109	299	122	407
Shelby	7,359	3,262	4,097	246	3,851	1,361	2,490	408	234	911	586	351
Stark	2,802	1,182	1,620	196	1,424	469	955	195	31	359	165	205
Stephenson	22,916	3,911	19,005	400	18,605	2,942	15,663	7,292	566	2,955	2,479	2,371
Tazewell	56,461	4,069	52,392	328	52,064	5,630	46,434	27,853	2,161	7,725	4,435	4,260
Union	7,782	1,754	6,028	276	5,752	3,005	2,747	1,105	(D)	565	574	503[b]
Vermilion	42,858	5,292	37,566	636	36,930	6,519	30,411	12,450	2,250	6,942	5,818	2,951
Wabash	6,425	1,213	5,212	113	5,099	891	4,208	1,359	193	731	610	1,315
Warren	9,155	2,539	6,616	382	6,234	1,376	4,858	1,176	270	1,755	1,182	475
Washington	5,435	2,355	3,080	234	2,846	869	1,977	357	170	610	575	265
Wayne	7,447	2,716	4,731	135	4,596	1,000	3,596	1,107	216	1,001	692	580
White	7,115	2,187	4,928	171	4,757	1,215	3,542	423	268	1,314	677	860
Whiteside	26,885	4,374	22,511	416	22,095	3,863	18,232	9,384	670	4,090	2,811	1,277
Will	85,331	7,433	77,898	625	77,273	13,758	63,515	22,351	7,036	15,227	12,194	6,707
Williamson	16,629	2,786	13,843	72	13,771	3,301	10,470	2,531	1,182	3,155	1,598	2,004
Winnebago	111,124	8,124	103,000	275	102,725	11,448	91,277	43,117	4,501	21,327	15,717	6,615
Woodford	8,565	2,565	6,000	246	5,754	1,524	4,230	1,012	255	1,555	1,044	364

[a] Includes mining, construction, finance-insurance-real estate, and "other" industries.

[b] Also includes category or categories for which (D) is shown.

(D) Not shown to avoid disclosure of confidential information. Data are included in totals.

Source: US Department of Commerce, Bureau of Economic Analysis.

Local Illinois Developments

Strikes, Unemployment Down in 1976

Working time lost because of strikes and the unemployment rate both dropped in Illinois in 1976 as compared with 1975.

Man-days idle because of strikes totaled 1,891,000 in the State last year, nearly a fifth less than the year before, according to the US Bureau of Labor Statistics. Shorter strikes reduced the total even though the number of strikes rose (from 382 to 421) and the number of workers involved remained about the same (roughly 151,500). Strikes in the Chicago SMSA represented about one-third of the total for the State, and more than 40 percent of the total days idled. The Chicago area contains slightly more than 60 percent of the Illinois labor force. Downstate strikes included one more than a month long against John Deere at Moline.

In contrast to Illinois, both work stoppages and man-days idle increased in 1976 in Region V (which includes Indiana, Ohio, Michigan, Minnesota, and Wisconsin as well as Illinois). The number of work stoppages rose from 1,312 in 1975 to 1,561 in 1976. Days away from the job because of strikes totaled 12.6 million, more than 5 million over the year before. The sharpest increases occurred in Ohio and Michigan, where man-days idle exceeded the number in any other year since 1970. In Ohio the prolonged rubber industry strike was an important factor and in Michigan the Ford strike contributed substantially to strike idleness. The Chicago area had more strikes than any other Region V metropolitan area. Strikes in the Chicago SMSA numbered 129.

Although more man-days were lost through strikes in 1976 in Region V, unemployment rates declined in six of the seven largest metropolitan areas of the North Central Region. At the same time, the percentage of the population with jobs increased in five of these areas, but employment gains for black workers occurred in only three.

In the seven Region V metropolitan areas reported on by the Chicago office of the Bureau of Labor Statistics, overall unemployment rates in 1976 varied from 6.3 percent in Milwaukee to 9.1 percent in Detroit, compared with a national metropolitan rate of 8.0 percent, down from 8.7 percent in 1975. Chicago's rate declined from 7.2 percent to 6.7 percent. However, central city figures showed higher levels. Chicago remained at 9.0 percent in both 1975 and 1976. The annual average unemployment rate for Illinois as a whole was 6.5 percent in 1976, down from 7.1 percent in 1975. The lower statewide figure reflects a lower unemployment rate outside the Chicago metropolitan area and the central city.

Illinois Business Indexes

Item	Sept. 1977 (1967 = 100)	Percentage change from	
		Aug. 1977	Sept. 1976
Employment — manufacturing[1]	88.4	+ 0.2	+ 0.5
Weekly earnings — manufacturing[1]	208.3	+ 2.3	+ 9.5
Consumer prices in Chicago[2]	178.5	+ 0.7	+ 6.6
Life insurance sales (ordinary)[3]	240.1	− 0.9	+ 1.2
Retail sales[4]	223.4[a, b]	+ 3.2	+15.9
Farm prices[5]	175.0	− 3.8	−12.5
Building permits — residential[4]	129.0	−10 6	+15.8
Coal production[6]	96.8	+ 3.7	+ 0.0
Petroleum production[7]	44.1	− 1.2	+ 1.8

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics; [3] Life Ins. Agcy. Manag. Assn.; [4] US Dept. of Commerce; [5] Ill. Crop Rpts.; [6] Ill. Dept. of Mines; [7] Ill. Geol. Survey.
[a] Preliminary. [b] Data for August 1977 compared with July 1977 and August 1976.

Workers Idled Through Strikes and Workers Unemployed, Region V

Bureau of Economic and Business Research

Comparative Economic Data for Selected Illinois Cities, September 1977

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS	$81,574[a]	3,506.3[a]	$47,301[a]	4,943	5.2
Percentage change from Aug. 1977	−0.5	−6.0	+24.5	−0.6	
Percentage change from Sept. 1976	−12.4	+3.1	+0.8	+3.2	
NORTHERN ILLINOIS					
Chicago	$31,275	1,738.8	$37,318	3,088	4.3
Percentage change from Aug. 1977	−15.3	−8.7	+29.4	−0.9	
Percentage change from Sept. 1976	+8.2	+1.4	−0.2	n.a.	
Aurora	$ 2,504	121.4	$ 476	41	3.7
Percentage change from Aug. 1977	−53.9	+1.5	−14.2	−0.9	
Percentage change from Sept. 1976	−12.5	+1.7	+7.9	n.a.	
Elgin	$ 2,962	82.2	$ 562	27	5.0
Percentage change from Aug. 1977	−6.2	−7.2	−0.5	−11.3	
Percentage change from Sept. 1976	+177.8	+1.7	+3.9	n.a.	
Joliet	$ 2,636	378.3	$ 305	41	4.8
Percentage change from Aug. 1977	+5.6	+1.2	+7.0	−0.9	
Percentage change from Sept. 1976	+29.9	+7.4	−9.5	n.a.	
Kankakee	$ 373	72.3[b]	$ 190	38	5.9[c]
Percentage change from Aug. 1977	+3.9	−1.4	+17.3	+1.1	
Percentage change from Sept. 1976	−57.8	+4.7	+239.3	n.a.	
Rock Island-Moline	$ 2,016	123.5[d]	$ 1,142	168	3.5[c]
Percentage change from Aug. 1977	−57.8	−3.1	+29.8	+0.5	
Percentage change from Sept. 1976	−17.8	−4.5	+16.1	+0.5	
Rockford	$ 3,458	154.7	$ 825	121	6.0[c]
Percentage change from Aug. 1977	−2.9	−3.2	+13.8	+0.3	
Percentage change from Sept. 1976	+146.5	−0.5	−0.2	−2.6	
CENTRAL ILLINOIS					
Bloomington-Normal	$ 4,065	55.6	$ 831	58	2.7[c]
Percentage change from Aug. 1977	−13.8	+0.0	+7.9	+2.7	
Percentage change from Sept. 1976	−66.4	+7.1	+4.9	+8.8	
Champaign-Urbana	$ 1,434	57.8	$ 686	71	3.2[c]
Percentage change from Aug. 1977	−9.7	−0.6	+15.1	+2.4	
Percentage change from Sept. 1976	−52.4	+9.9	−3.8	+0.7	
Danville	$ 643	45.2	$ 388	40	6.0[e]
Percentage change from Aug. 1977	−29.0	−7.4	+0.3	+4.2	
Percentage change from Sept. 1976	+6.5	+11.1	−13.0	n.a.	
Decatur	$ 4,900	122.6	$ 475	55	5.2[c]
Percentage change from Aug. 1977	+3.2	+6.9	+31.5	+1.9	
Percentage change from Sept. 1976	+86.4	+3.0	+3.9	+0.2	
Galesburg	$ 1,168	31.2[b]	$ 161	28	6.0[e]
Percentage change from Aug. 1977	+8.8	+0.6	+18.4	−0.1	
Percentage change from Sept. 1976	−16.3	−1.3	−4.7	n.a.	
Peoria	$ 7,904	195.7	$ 1,157	163	4.1[c]
Percentage change from Aug. 1977	+1.8	−1.2	+4.4	+0.3	
Percentage change from Sept. 1976	−10.1	+2.3	−12.6	+0.2	
Quincy	$ 5,596	43.6	$ 212	41	5.7[e]
Percentage change from Aug. 1977	+523.8	−7.2	+11.0	+0.7	
Percentage change from Sept. 1976	+341.7	+2.3	+1.9	n.a.	
Springfield	$ 4,887	112.2	$ 1,793	89	4.1[e]
Percentage change from Aug. 1977	−10.8	−14.9	+6.3	−3.8	
Percentage change from Sept. 1976	+96.2	+9.5	+23.6	−3.4	
SOUTHERN ILLINOIS					
East St. Louis	$ 175	29.0	$ 153	239	6.0
Percentage change from Aug. 1977	−23.6	−9.4	+5.5	+0.0	
Percentage change from Sept. 1976	−99.2	−2.7	−14.0	n.a.	
Alton	$ 3,605	69.7	$ 125	17	6.4
Percentage change from Aug. 1977	+1,869.9	−21.7	+13.6	+0.0	
Percentage change from Sept. 1976	+3,901.1	−18.1	+17.6	n.a.	
Belleville	$ 1,225	31.4	$ 241	20	4.6
Percentage change from Aug. 1977	+54.3	−17.4	+5.7	+0.0	
Percentage change from Sept. 1976	+1,259.6	+11.7	+4.8	n.a.	
Carbondale-Murphysboro	$ 748	41.1	$ 261	26	6.7[e]
Percentage change from Aug. 1977	+126.6	+7.6	+1.9	+1.7	
Percentage change from Sept. 1976	−7.8	+21.2	−5.4	n.a.	

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 7 October 1977. [4] Illinois Department of Labor: preliminary.
[a] Total for cities listed. [b] Includes immediately surrounding territory. [c] Data are for standard metropolitan statistical areas. [d] Includes East Moline. [e] Labor market area. n.a. Not available.

Changing Environment for Gasoline Marketing

Gasoline consumers became painfully aware of a gas marketing crisis with the onset of the Arab oil embargo in October 1973. Lines formed at gasoline stations and prices soared in a very short period. Pump prices for regular gasoline rose from an average of 38.8 cents to 52.4 cents in one year. The fear of gas rationing and even higher prices alarmed consumers and marketers alike.

After the embargo, however, the American public soon resumed buying gasoline in increasing quantities. Prior to 1973, highway motor gasoline consumption was increasing at an annual rate of 5.4 percent. After a 1.3 percent decline between 1973 and 1974, consumption climbed 2.5 percent in 1975 and 5 percent in 1976. The 1977 outlook is for another 5 to 6 percent rise. Meanwhile gasoline prices have inched upward to the current average price of 63 cents per gallon for regular gas.

Gasoline accounts for about 45 percent of US oil consumption and is used almost entirely for highway transportation (94 percent). Nearly 112 million privately owned automobiles consume 70 percent of this total: trucks and buses account for 20 percent and 10 percent, respectively. Gasoline and oil expenditures in 1976 accounted for nearly 3.8 percent of total personal consumption expenditures and approximately 7.3 percent of all retail sales.

About 130 companies operating 260 refineries in the United States distribute gasoline through more than 15,000 wholesalers (known as jobbers) to approximately 189,000 retail service stations. Less than 8 percent of the retail outlets supplied by the large oil companies are owned and operated by such companies. Ninety percent of the branded gasoline sales by these companies are to wholesale or retail resellers who control their own prices and operating practices. The branded sales of the top four motor gasoline marketers (Texaco, Shell, Amoco, and Exxon) accounted for 29 percent of the market in 1976. The top firm (Texaco) had 7.5 percent of the market.

Companies have different distribution strategies depending upon the regional market and relative cost of each type. For instance, Amoco Oil Company (the leading gasoline marketer in Illinois) operates about 24,300 branded retail outlets in 48 states. Approximately 40 percent of these stations are supplied directly and 60 percent through branded jobbers or commission agents. Nearly all of the stations are lessee/dealer operated. On the other hand, Clark Oil Company (which operates two refineries in Illinois) distributes in 13 states and operates about 1,800 branded retail outlets. All of its service stations are supplied directly, and 60 percent of these outlets are operated by company-paid dealers.

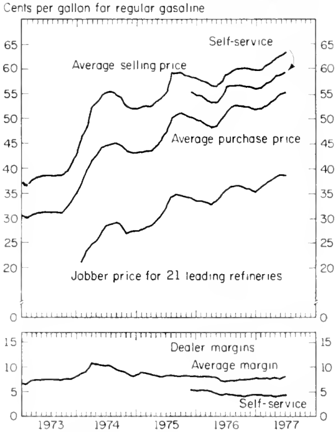
The most obvious trend in gasoline marketing has been increasing prices. Jobber prices — the price at which a petroleum jobber purchases the refined product from a refiner or terminal operator — jumped almost 35 percent in the first few months of 1974 (see graph). Pump prices followed suit and as gasoline supplies tightened, motorists were generally happy to find gasoline under any name. High prices and supply availability forced a cut in the number of stations in the US from an estimated 226,000 in 1973 to 189,000 in 1976.

Independent jobbers assert that they were the hardest hit among gasoline marketers. Major refiners cut back on sales to unbranded customers in favor of selling through their own branded outlets; and independents, relying on higher priced imported oil, frequently priced notably above the major brand station. The majors in turn priced frequently at disparate levels depending on their mix of domestic and foreign oil.

"The Majors"

Vertically integrated oil companies — those whose operations span the line of economic activity from production of crude oil to retail distribution of refined products — have come under heavy attack since the embargo. Each of the major refiners has managed to acquire and support a network of retail outlets dealing exclusively in its gasoline. But only a fraction of these stations are actually owned and operated by the majors. The more typical arrangement is that the refiner exer-

Average Gasoline Prices and Dealer Margins



Bureau of Economic and Business Research

cises considerable control over its numerous retail dealers through various contractual devices including agreements and leasing arrangements covering both land and physical facilities. Additionally, the majors have been relatively successful in their attempt to differentiate their product from the rest of the market, thereby commanding slightly higher prices and margins.

These companies have historically made their big profits "upstream" — that is, in the production of crude oil. But now crude oil profits are being battered by government price controls and there is some evidence that the majors have been interested in securing larger profits at the pump. Some of these companies have been accused of squeezing independents through lease arrangements into adopting high volume-low overhead outlets emphasizing self-service. But many individual proprietors gain a substantial proportion of their income from garage-service sales and they have been reluctant to cooperate. Some independent dealers have taken court action over lease terminations and a few states (including Illinois) have introduced legislation that would limit the extent to which a major could control the activities of retail outlets.

Illinois

Industry sources estimate that 8,300 service stations are currently operating in Illinois. This number represents a 19 percent decline from the 1972 total of 10,200 stations. One Census publication indicates that nearly 8,000 jobs were lost temporarily between 1973 and 1974 and that the smaller stations were the ones that dropped from the market. A small dealer who depended upon gasoline sales alone to support his business during critical gasoline shortages could not absorb constant price hikes — he was typically already selling gas at a lower price as a result of cutting his profit margins to attract customers.

Illinois service stations distributed more than 5.3 billion gallons of gasoline and 506 million gallons of diesel fuel to highway consumers in 1976. The typical Illinois station pumped about 33,300 gallons of gas per month in 1976. Additionally, the average station in the State accumulates nearly $185 in sales for each 1,000 gallons of gasoline pumped. These sales include tires, batteries, tune-ups, and other accessories.

In 1976 Illinois collected $390 million in state motor fuel tax revenues which account for approximately 8 percent of the state's total tax revenues. The current tax rate per gallon (excluding local taxes) is 11.5 cents — this includes the federal tax of 4 cents per gallon. The US average now totals 12.03 cents a gallon. In Illinois these taxes are equivalent to about 23.2 percent of the pretax retail price.

There are 17 major companies with refinery resources marketing wholesale and retail in Illinois. In 1976 they accounted for 47 percent of the total gasoline gallonage distributed in the State. The so-called independents, including co-op company distribution, accounted for the remaining 53 percent (these totals include those independents that may purchase surplus gasoline from the majors). Of the total 5.6 billion gallons distributed, about 97 percent was consumed on public highways.

The 17 major companies distributing in Illinois have lost ground to independents with regard to the percentage of total state distribution. In 1964 the majors supplied 59.4 percent of the state's gasoline needs compared with a new low of 47.1 percent in 1976. When gasoline sales to independent nonbranded outlets were included, Amoco Oil Company was the leading supplier of gasoline to the Illinois market in 1976 — about 17 percent of the state's total gallonage. Shell was the second largest supplier with 10.1 percent of the market. Other market shares for major operators in Illinois include Texaco, 5.9 percent; Clark, 5.1 percent; Marathon, 5.1 percent; Mobil, 4.8 percent; Arco, 4.5 percent; Phillips, 4.2 percent; Gulf, 3.4 percent; and Sun, 3.1 percent. These market shares have held quite steady over the past five years with the exception of Amoco, which has dropped from 19.3 percent of the market in 1972.

Pump It Yourself

The most drastic change in gasoline marketing has been the mushrooming growth of self-service operations. Although self-service has been around for some time, its popularity has spread widely in recent years. Only 6.2 percent of the nation's gasoline stations offered some form of self-service in December 1974. By July 1975 the figure had increased to 14.1 percent. A recent survey indicated that 31 percent of the nation's gasoline volume is now being dispersed at the do-it-yourself pumps. Self-service sales have grown to nearly 75 percent of the market in some states.

The average national price of gasoline at self-serve stations is 2 to 5 cents lower than at conventional stations. These lower prices reflect lower fixed costs, lower labor costs, and an emphasis on volume — all characteristics of the new marketing technique.

On 1 May 1977 Illinois became the 48th state to allow self-service (Oregon and North Dakota have yet to follow). Allowance was provided by changing the safety regulations originating from the state fire marshal. Earlier requests for repeal of the fire regulations met stiff political opposition from independent dealer associations across the State who were worried about the employment effects of such allowance.

The enactment of self-service is expected to save Illinois consumers nearly $60 million a year. In addition, state tax revenues are expected to rise by $4 million to $6 million a year as motorists near state borders will no longer have an incentive to cross over to obtain less expensive gas. It has been predicted that some of the marginal stations which left the market over the past several years will return and become competitive.

The Chicago market has been slow to react to the repeal of the safety regulations because of a rule set by Cook County's Department of Consumer Sales, Weights, and Measures. The rule requires that full service pumps be offered whenever self-service is offered and that there must be a 10 percent price differential between the two. In some cases full-service prices have been raised in order to meet the "10 percent" rule. The commission has recently lowered the differential to 5 percent.

MICHAEL TREBING

The Leading Indicators: Abused or Overused?

CHARLES W. WILEY

The general public, through expanded media coverage of economic analysis, is becoming increasingly aware of the index of leading economic indicators. At the same time, however, many economic analysts have recognized the limitations of the index as a precursor of business activity. Other analysts suggest that the index may have value if used with other indicators. Leading economic indicators, along with trends in other aspects of the economy — especially business and consumer expectations and public policy plans, can give indications of short-range business activity.

The Commerce Department's Bureau of Economic Analysis (BEA) has been calculating the composite indexes of cyclical indicators since 1938. From 1972 to 1975, the BEA conducted a comprehensive study of cyclical indicators and the results of that analysis are now present in the indicators published monthly in *Business Conditions Digest.*

Construction of the Leading Indicators Index

About 150 time series have been found to conform well to wide fluctuations in aggregate measures of economic activity. These series are classified further as tending to lead, coincide with, or lag behind trends in aggregate economic activity. Sixty-two of these series are classified as leading indicators when timed at business cycle peaks. Forty-seven of the series are classified as leading indicators when timing at business cycle troughs is considered. However, only 12 of the cyclical time series make up the composite index of leading economic indicators.

These 12 indicators are evaluated and chosen on the basis of six criteria: economic significance, statistical adequacy, consistency of timing at both business cycle peaks and troughs, conformity to business expansions and contractions, smoothness, and prompt availability. A detailed weighting scheme is used to assess and score each series on the basis of these criteria. Timing is given the largest weight and availability is given the smallest weight.

The series included in the index of leading economic indicators are (1) the length of the average workweek of production workers; (2) an index of net business formation; (3) Standard and Poor's index of 500 common stock prices; (4) new building permits (private housing units); (5) the layoff rate among manufacturing workers; (6) new orders, consumer goods and materials industries; (7) contracts and orders for plant and equipment; (8) net change in inventories on hand and on order; (9) the change in sensitive prices (wholesale price index of crude materials excluding foods and feeds); (10) the percentage of companies reporting slower deliveries; (11) money balances (M-1) (1967 dollars); (12) percent change in total liquid assets.

The composite index is constructed in five steps. First, monthly percentage changes are computed for each component series. Next, each series of changes obtained in the first step is standardized. That is, it is divided by the long-run average of those changes. Standardization puts all the components on an equal basis and prevents the most volatile series from dominating the index. Third, a weighted average of these standardized changes is computed. The weights are derived from the series' scores as cyclical indicators. Fourth, these average standardized changes are again standardized (divided by their long-run averages.) Finally, the standardized average changes are cumulated into a monthly index which is based on 1967 = 100. These procedures smooth out independent measurement errors and other "noise." It is believed that as a result of all these transformations, the composite index gives more reliable signals than the individual component series.

The Record of the Index

Analysis of the leading economic indicators has shown that the index varies more in percentage terms than does real GNP. The accompanying chart of leading indicators and absolute changes in real GNP (both plotted on a quarterly basis) shows this unstable nature of the index of leading indicators. BEA analysis also suggests that the leading indicators tend to precede changes in real GNP by about one quarter (three months). However, a decline in the leading indicators, even for a three-month period, does not necessarily imply a future recession, although it may signal a slowdown in economic activity.

During the period from 1948 to the third quarter of this year, there were 15 periods in which the index of leading indicators declined for three or more consecutive months. A three-month decline in the index is often used as a "signal" of an impending recession. The response of real GNP in these periods was more equivocal, however. Only in four of these same time periods did real GNP decline for two or more consecutive quarters. These four periods were associated with the recessions in 1953–54, 1960–61, 1969–70, and 1974–75. The reaction of real GNP to the economic conditions which precipitated the fall in the index of leading indicators was mixed during the recessions of 1948–49 and 1957–58.

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In other words, real GNP never declined in consecutive quarters during these periods although the general trend was downward. Moreover, in 5 of these 15 periods, real GNP actually rose on a quarterly basis even though there were quarterly declines in the index of leading indicators.

Thus, the index has provided a "signal" for an impending recession 15 times since 1948; however, only 6 such contractions actually occurred. This low prediction record means that real GNP does not respond to business conditions as does the index of leading indicators. The low prediction rate also reflects the use of a rule of thumb which has little empirical foundation for forecasting future economic activity.

Even when the index has accurately "called" a slowdown, it has sometimes given very misleading signals about the severity of the impending business decline. For example, there was a three-quarter decline in the index beginning in the middle of 1966 which was not followed by an actual recession, although the pace of economic expansion did moderate. At the other extreme, from June to November 1973, the index fell 2.4 percent — the smallest of any of the signals of the index prior to post-World War II recessions. But the following contraction turned out to be the longest and most severe of any recession since 1945.

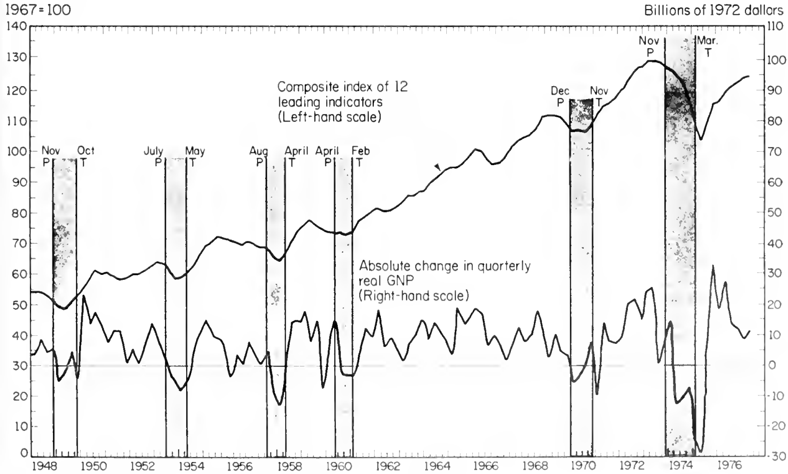
Events surrounding economic conditions in the second and third quarters of this year illustrate the limitations of the index. The modest slowdown in economic activity this past summer was accompanied by consecutive declines in the index in May and June. When July's index was down also, some commentators began to warn of an impending recession. Behind their warning was the rule of thumb cited earlier which some economists use in their forecasts of future business trends. As it turned out, the index turned upward in August and, at the same time, July's index was revised upward — from a 2 percent decline to a 2 percent increase. What was first perceived by many as an important signal turned out to be nothing more than a two-month dip.

Shortcomings of the Leading Indicators Index

The index is published in the middle of each month, and is based on business activity in the previous month. This one-month publication lag prevents any subsequent economic activity from being included in the analysis of ongoing trends in the economy. The publication lag also contributes to what may be the most important problem with the index in terms of this discussion — the fact that it is subject to considerable revision. Those economists who predicted a recession this past summer based on the early trends in this index were undercut by subsequent revisions.

The index is subject to revision on two counts. First, the index does not include all of its components when it is initially reported each month. The absence of important indicators makes the use of the initial index even less meaningful than the final revised index. Second,

Leading Indicators Index and Change in Real GNP



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the components themselves are subject to revision as final data become available in later months. The initially reported index may be revised as many as four times as all components become available and as other components are revised to final form. Economists who analyze the initial index as if it were the final revised index totally disregard these factors which reduce the value of the index of leading indicators.

Conclusion

In summary, it may be misleading to rely on the index of leading economic indicators itself as a harbinger of business activity. The index can aid in the evaluation of the present economy and in forecasting future short-range trends, but only if it is used in conjunction with measures of many other key factors in the economy. "Calling" a recession after a quarterly decline in the index of leading economic indicators is somewhat akin to calling a baseball batter out even though the catcher drops the third strike. If the batter makes it to first base before the ball does, the catcher becomes a goat. In the same way, if the economy is stimulated, or if the index is revised upward after this three-month decline, the "bearish" analyst becomes little more than a false prophet of economic doom. Short of a recession itself, this is the last thing the economy needs, or can afford.

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1978 — Another Year of Expansion

The economy will continue to expand through the remainder of the year, the fourth successive year of expansion. Economic growth will be sufficient to bring about further modest reductions in unemployment. However, it is likely that there will be some increase in the rate of inflation accompanied by further upward movement in interest rates. The demand for housing will be strong, but the availability of mortgage funds may diminish.

Government economic policy is not likely to retard developments in the private economy. With continuing strong credit demands, the Federal Reserve would find it difficult to achieve a slower growth in the money supply. Fiscal policy is expected to move toward ease on balance.

Output Will Expand

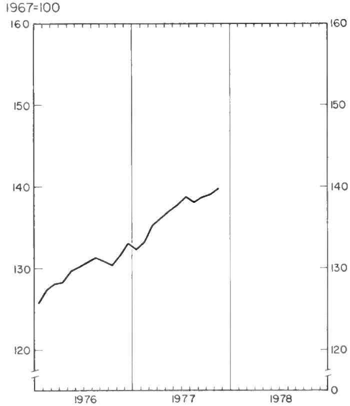
The growth in real output during 1978 is not expected to depart from the pace of the past several years. We anticipate about a 5 percent growth in real gross national product — that is, GNP adjusted for the effects of inflation. Last year, real GNP rose 4.9 percent according to preliminary estimates, somewhat slower than the 6.1 percent increase in 1976. Industrial output scored impressive gains (see chart), rising 5 percent for the year.

What does it mean to say that real GNP will grow by *about* 5 percent? By year's end, growth may be closer to 6 percent or 4 percent. This is not to suggest that small changes do not make any difference. A single percentage point of real GNP represents roughly two days' output. To the individual, it means about two days' pay. To the unemployed, it may mean a job. Notwithstanding the importance of small deviations, there is simply no way of slicing the forecast any thinner. Moreover, economic policy makers do not know how to "fine tune" moderate changes in the economy.

Consumer spending will grow rapidly in 1978. Retail sales will rise about 10 percent in 1978, although automobile sales may weaken somewhat. Last year auto sales reached 11.3 million units (including 2.1 million imports). In 1978 auto sales will edge downward to about 11 million units.

Capital spending is not expected to provide a major thrust to business activity. According to Administration economists, real plant and equipment investment must rise about 10 percent per year in order for the economy to achieve sufficient growth to reach full employment and

Industrial Production



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for the federal government to balance its budget. The Administration's business investment hopes will not be achieved in 1978, as capital outlays will be only about 4.5 percent greater than in 1977.

Home construction is unlikely to maintain the pace achieved in 1977. Last year, housing starts averaged nearly 2 million units, almost one-third greater than in 1976 and just below the 1973 record year. If interest rates continue to move higher (as suggested below), the flow of funds into savings institutions is likely to shrink. Indeed, disintermediation — a movement of funds from intermediaries into market instruments — becomes a strong possibility. That is, mortgage funds may be "crowded out" to alternative uses. As a consequence, home construction may be restrained despite continued strong housing demands.

Labor Markets Will Improve

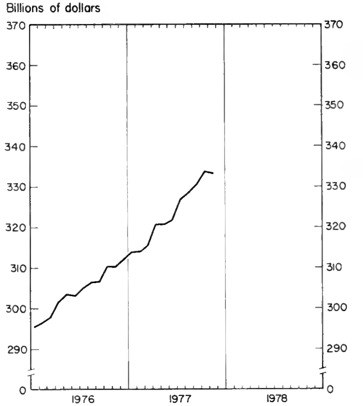
Employment will grow enough this year to achieve a further reduction in unemployment. Employment expanded 4.7 percent in 1977. Reflecting the increase in jobs, the unemployment rate drifted downward during the year to 6.4 percent in December, more than a full percentage point below its level in December 1976.

Even if employment growth moderates, there is a good chance that unemployment can decline to about 5.5 percent by the end of the year. The labor force grew very rapidly last year, as the overall participation rate — the portion of the population entering the work force — rose dramatically. In December a record 58 percent of the working age population was employed.

Inflation and Interest Rates Will Move Up

Price increases are expected to quicken this year. Consumer prices in 1977 were about 6.7 percent above their year-earlier level, and wholesale prices averaged 5.9 percent higher. Accelerating inflation in the recent past reinforces the belief that inflation rates are likely to continue to move higher. There is no presumption, however, that inflation will return to a "double digit" rate. There is substantial unused capacity, as utilization rates are below 85 percent. Indications received thus far from OPEC countries suggest that oil price increases may be held to

Money Supply



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5 percent. If so, this cost-push element will be less in 1978 than in the past several years. Food prices are subject to an additional element of uncertainty this year. Crop supplies — always subject to the vagaries of weather — are threatened by a farmers' strike.

Interest rates will move higher, reflecting continued expansion in the economy and inflation. The prime rate reached 8 percent in mid-January, compared with 6.25 percent in January 1977. A prime rate of 9 percent by late this year is likely. Mortgage interest rates, which moved above 9 percent in late 1977, will edge higher this year.

Economic Policy Will Accommodate Growth

Government economic policies are likely to remain passive during 1978. Although interest rates will move higher, monetary expansion is often accompanied by rising interest rates. For example, the money supply rose more than 7 percent in 1977 (see chart), while interest rates jumped sharply.

Although the supply of money is likely to register another strong increase this year, bank credit may tighten. After several years of slack, banks are likely to feel the forces of disintermediation and find it increasingly difficult to meet their customers' credit needs.

Fiscal actions can be expected to stimulate the economy on balance. To counter the restrictive effects of the increase in social security taxes, the Administration has proposed a net tax cut for fiscal 1979 of about $25 billion — with a tax reduction of $35 billion partly offset by revenue-increasing tax changes of roughly $10 billion.

WILLIAM R. BRYAN

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Local Illinois Developments

Changes in Farm Structure

Changes in the structure of Illinois farming since the 1950s have reflected US changes. Farms in Illinois, as in the US, range from small family farms to large-scale cash operations. The most obvious change in the postwar period is the continuing decline in the number of farms. The number of farms in the nation shrank by slightly more than 50 percent between 1950 and 1975, from 5,648,000 farms to 2,786,000. The Illinois number has gone from 192,268 in 1950 to 111,049 in 1974, a decline of about 43 percent. Nationally the number of farms lost was highest in 1950 at 220,000. Since then, the shrinkage has decreased nearly every year, reaching 22,000 in 1976. A similar development appears in Illinois figures. The steady, regular decrease in the rate of decline suggests the approach of an end to the merger of farms.

The decline in the number of farms has been accompanied by a decline in the total acreage, both nationally and in Illinois. In the State, acreage fell by 6 percent from 1950 to 1974; in the US, acreage was reduced by almost 10 percent. Gross physical production, however, has not fallen over this period, as shown, for example, by the recent record sizes of three crops important nationally and in Illinois: corn for grain, soybeans, and wheat.

The changing farm picture acquires another dimension in an examination of sales class breakdowns. In both Illinois and the US for four agricultural censuses (1959, 1964, 1969, and 1974), the percentage of farms in the highest sales class for agricultural products ($40,000 and over) has increased substantially, while the percentages of farms in the lower sales classes have declined. In Illinois, the $40,000 and over sales class went from 3.7 percent of the total number of farms in 1959 to 33.8 percent in 1974. The lower three sales classes (sales of $2,500 to $20,000) slipped from 60.9 percent of the total in 1959 to 34.0 percent in 1974.

In terms of percentage of sales relative to total sales, the $40,000 and over class in Illinois showed an even more dramatic increase, moving from 21.6 percent in 1959 to 78.6 percent in 1974. Shares of all other classes declined throughout the period. High farm prices at the end of this period account for some of this change as more and more farms moved into higher brackets.

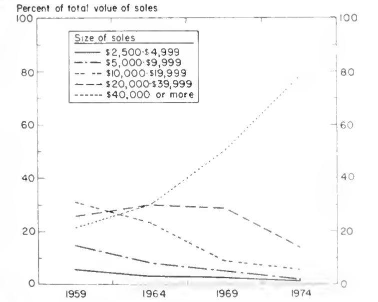
A comparison of farm classes by acreage size shows that the number of large farms — whose sales can be expected to be in higher sales classes — is an increasing percentage of the total number of farms. In Illinois in 1959 the four bottom categories of farms (those of 99 acres or less) were 29.2 percent of the total, the four middle groups (100–259 acres) 45.4 percent, and the four largest size groups (260 acres or more) 25.4 percent. In 1974 these numbers became 21.9 percent, 36.2 percent, and 42.0 percent respectively, the four largest categories gaining at the expense of all the lower groups. Similar figures apply for the US. Both the US and Illinois appear to be approaching an end to the process of farm concentration that has occurred in the past 25 to 30 years.

Illinois Business Indexes

Item	Nov. 1977 (1967 = 100)	Percentage change from Oct. 1977	Percentage change from Nov. 1976
Employment — manufacturing[1]	n.a.		
Weekly earnings — manufacturing[1]	n.a.		
Consumer prices in Chicago[2]	179.4	+0.3	+ 6.5
Life insurance sales (ordinary)[3]	258.6	+1.0	+17.8
Retail sales[4]	221.5[a]	+1.3	+ 1.8
Farm prices[5]	187.0	+3.3	+ 5.0
Building permits — residential[4]	115.7	+0.5	+ 9.8
Coal production[6]	99.7	+3.0	+ 6.2
Petroleum production[7]	41.9	−3.2	− 5.4

[1] Ill Dept of Labor. [2] US Bureau of Labor Statistics. [3] Life Ins Agcy Manag Assn [4] US Dept of Commerce. [5] Ill Crop Rpts. [6] Ill Dept of Mines. [7] Ill Geol Survey
[a] Preliminary

Distribution of Farm Sales in Illinois



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The Illinois State Lottery

There is perhaps a gambling instinct in all of us and possibly no state-operated system has taken advantage of this perennial urge as has the lottery. State governments, battered by inflation and a rising demand for public activities, have turned to the lottery as an alternative to traditional revenue sources.

The history of government-sanctioned lotteries in the US can be traced to colonial times. These games of chance were the source of part of the financing of the Jamestown expedition and, later, of both Rutgers and Princeton universities. In 1819 the first General Assembly of Illinois authorized two lottery projects — a two-year grant to raise $10,000 for navigation of the Big Wabash River and $50,000 to improve health in the "American Bottoms" by draining its lakes and ponds. However, with the termination of the scandal-ridden Louisiana State Lottery in 1893, lotteries passed temporarily into oblivion.

The reemergence of the lottery came about in 1963 when the New Hampshire Sweepstakes appeared. New York followed in 1967 but in both states results were rather disappointing. Players were required to register, tickets were several dollars apiece, and the drawings were held only once a year. Profiting from the experience of its neighbors, New Jersey in 1970 established a somewhat different lottery. Low ticket prices, many winners, easy rules, and attractive large prizes marked the success of this lottery and the others to follow. Connecticut, Maine, Maryland, Massachusetts, Michigan, Pennsylvania, and Rhode Island soon legalized lotteries.

Illinois became the 11th state to legalize a lottery when it approved the Illinois Lottery Law in 1974 (14 states currently have them). The Illinois lottery began operations on 1 July 1975 with the expectation of selling about $150 million of tickets in its first operating year. A new division of the Department of Revenue was added to administer the program. The division currently employs about 180 men and women in Springfield and nine district offices. A superintendent and a five-person Lottery Control Board, all appointed by the governor, are the decision-making body for the lottery.

From the first ticket sale in 1974 through fiscal 1977, the Lottery Board introduced 16 different games and sold more than 786 million tickets. About 23 million of these tickets have been claimed as winners and over $188 million in prizes have been awarded. Twenty persons have become "millionaires" — each wins taxable income of $50,000 annually for 20 years. Additionally, the lottery has furnished a profitable business for licensed ticket sales agents. In 1977 almost $6.9 million in commissions and fees went to 680 banks and 5,500 ticket agents. These agents receive a commission of 5 percent of ticket sales and a bonus commission if they sell tickets winning prizes of $5,000 or more.

The Illinois Lottery Law requires that at least 40 percent of total ticket and license revenues be contributed to the state's general revenue fund. Of the $110 million yield from ticket sales in 1977, 45 percent was allocated for prizes, 6.2 percent for commissions and fees to agents and banks, and 7.5 percent for operating expenses (salaries, game development, printing, advertising, and so on) and 41.3 percent to the State. The general revenue fund was allocated in the following manner: 34.6 percent for education; 19.5 percent for health and social service programs; 20.3 percent for environmental and natural resource protection; 13.4 percent for public aid; and 12.2 percent for debt, income tax refunds, and to legislative agencies.

Gross sales for fiscal years 1975 and 1976 were $129 million and $163 million respectively. The 1977 total ($110 million) represented almost a 33 percent decline from the 1976 total. Ticket sales peaked in 1976 when the lottery's first "instant" game was introduced. Sales in one month alone reached $34 million.

Although the lottery contributes a small share of total state revenue yields (currently about 1 percent), it has become a marginally important one for the general fund. Officials are optimistically expecting the lottery to yield annual state revenues of about $60 million in the future — the State received $58 million, $76 million, and $48 million in the first three years. Other states have experienced similar declines in the third year of operation but then experienced a general "plateauing" of revenue.

The Moral Issue and Regressivity

Any discussion of the fiscal aspects of the lottery does not begin to uncover the most controversial public policy issue that surrounds it. Many have objected to it on a moral basis — gambling in any form is evil and should be prohibited. But it is interesting to note that almost every church group, with the exception of the Methodists and Quakers, have used lotteries in one form or another.

Besides the moralistic argument against such publicly sponsored activities is a debate concerning the regressivity of the lottery (whether it takes a larger "tax" percentage of income from the poor). State officials assert that the working urban middle class provides the best customers for its lotteries. A 1976 lottery survey indicates that the "average" Illinois ticket buyer appears to be "44 years of age with a high school education and a family income of $12,500." The lower income, upper income, and rural population are buying tickets sporadically.

The long-run prospects of the lottery are uncertain. Two things are known for certain though: by no means will the lottery end or reduce the present levels of taxes, nor will it be appreciably detrimental to the illegal games, which are still thriving. Nevertheless, the growing popularity of lotteries is clear evidence that states are pursuing new revenue sources that the public is willing to provide. Simultaneously, the State is providing a new "good" which the public eagerly wants. However, a dilemma remains in that lotteries may constitute a relatively inequitable revenue base.

MICHAEL TREBING

Comparative Economic Data for Selected Illinois Cities, November 1977

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		n.a.	3,123.9[a]	$41,616[a]	n.a.	n.a.
Percentage change from	Oct. 1977		−3.9	n.a.		
	Nov. 1976		−2.3	−7.6		
NORTHERN ILLINOIS						
Chicago		$25,877	1,517.0	$31,685	n.a.	n.a.
Percentage change from	Oct. 1977	−47.9	−9.0	−15.0		
	Nov. 1976	−10.1	−3.9	−9.3		
Aurora		$ 2,491	140.2	$ 463	n.a.	n.a.
Percentage change from	Oct. 1977	−45.8	+21.1	−4.5		
	Nov. 1976	+56.8	−3.9	+2.6		
Elgin		$ 1,212	77.8	$ 568	n.a.	n.a.
Percentage change from	Oct. 1977	−3.5	+3.1	+1.0		
	Nov. 1976	−23.2	+0.7	−1.8		
Joliet		$ 1,519	337.3	$ 327	n.a.	n.a.
Percentage change from	Oct. 1977	−38.5	−1.5	+5.8		
	Nov. 1976	+15.4	−4.3	−6.0		
Kankakee		$ 163	67.7[b]	$ 215	n.a.	n.a.
Percentage change from	Oct. 1977	−82.6	+3.0	+8.5		
	Nov. 1976	−33.4	−2.4	+5.9		
Rock Island-Moline		$ 8,773	118.2[c]	$ 1,062	n.a.	n.a.
Percentage change from	Oct. 1977	+415.4	+6.3	+2.7		
	Nov. 1976	−3.5	+11.5	+6.6		
Rockford		$ 2,916	145.3	$ 841	n.a.	n.a.
Percentage change from	Oct. 1977	+3.0	+0.1	+9.5		
	Nov. 1976	+9.9	+0.2	−4.4		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 3,504	41.8	$ 823	n.a.	n.a.
Percentage change from	Oct. 1977	−22.3	−0.7	+2.4		
	Nov. 1976	−20.8	+0.2	+1.9		
Champaign-Urbana		$ 2,424	47.5	$ 719	n.a.	n.a.
Percentage change from	Oct. 1977	+29.5	−8.8	+16.3		
	Nov. 1976	−37.5	+5.0	+16.1		
Danville		$ 576	40.5	$ 281	n.a.	n.a.
Percentage change from	Oct. 1977	+21.5	−0.4	n.a.		
	Nov. 1976	−70.4	+2.0	−40.9		
Decatur		$ 4,342	113.0	$ 407	n.a.	n.a.
Percentage change from	Oct. 1977	−12.2	+5.7	n.a.		
	Nov. 1976	−14.2	+6.2	−8.3		
Galesburg		$ 2,999	28.4[b]	$ 160	n.a.	n.a.
Percentage change from	Oct. 1977	+120.3	+1.4	+10.3		
	Nov. 1976	+150.9	+0.3	−5.3		
Peoria		$ 3,525	172.4	$ 1,340	n.a.	n.a.
Percentage change from	Oct. 1977	−13.7	−1.4	+4.8		
	Nov. 1976	−46.7	+1.8	−9.6		
Quincy		$ 404	36.7	$ 201	n.a.	n.a.
Percentage change from	Oct. 1977	+14.1	−4.1	−3.8		
	Nov. 1976	+7.1	−10.2	−6.0		
Springfield		$ 5,181	102.5	$ 1,563	n.a.	n.a.
Percentage change from	Oct. 1977	−25.6	+6.1	11.1		
	Nov. 1976	−68.9	0.7	1.7		
SOUTHERN ILLINOIS						
East St. Louis		$ 99	24.7	$ 152	n.a.	n.a.
Percentage change from	Oct. 1977	79.5	−4.2	−4.4		
	Nov. 1976	+110.6	−1.5	7.8		
Alton		$ 284	61.2	$ 128	n.a.	n.a.
Percentage change from	Oct. 1977	−89.6	6.8	+14.2		
	Nov. 1976	+407.1	13.6	+2.4		
Belleville		$ 368	20.9	$ 433	n.a.	n.a.
Percentage change from	Oct. 1977	+1.3	−13.2	+3.5		
	Nov. 1976	50.6	0.9	+78.9		
Carbondale-Murphysboro		n.a.	30.8	$ 248	n.a.	n.a.
Percentage change from	Oct. 1977		1.9	+4.6		
	Nov. 1976		4.3	12.0		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports, accounting period ending 2 December 1977. [4] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Includes immediately surrounding territory. [c] Includes East Moline. n.a. Not available.

What Great Britain Has Done to Balance Its Budget

ROLAND W. BARTLETT

Many municipalities, states, and nations throughout the world during recent years have overexpanded the public sector of their economies and are finding it difficult, if not impossible, to increase taxes enough to pay increased costs. Excessive costs as related to income in New York City were outlined in the May issue of the *Illinois Business Review* together with methods being used for meeting their financial crisis.

When James Callaghan became prime minister of Great Britain in 1976, he was faced with expenditures of $3.6 billion a year more than income, a situation similar to that of Mayor Abraham Beame in New York City a year earlier. Mayor Beame obtained loans from the US government of up to $2.3 billion a year with specific provisions for their repayment with interest. Prime Minister Callaghan has met his costs with the following loans (in billions):

International Monetary Fund	$3.9
Bank for International Settlement	3.0
International Banking Syndicate	1.5
Sale of 66.5 million shares of British Petroleum	.56

It is expected that income for repayment of these loans will be forthcoming, in substantial part, from oil offshore Scotland, which is just coming into production. These loans, extending to 1982 and beyond, stopped the downward trend in the value of the British pound, which had fallen to a low of $1.56 in October 1976. In 1977, the value of the pound had been stabilized at $1.72 to $1.74.

In June 1977, the Bank of England set terms for the sale of 66.5 million shares of British Petroleum to provide $560 million toward the nation's 1977 budget deficit. In this, as in some of its earlier actions, Britain, like New York City, was using capital to pay current operating expenses.

In Britain as in New York City, an underlying cause of excessive expenditures has been the ever increasing number of workers in welfare and other government agencies. In addition, Britain has excessive employees in defunct industries nationalized by the British government. In 1975, a total of 1,608,000 people were employed by the British government in public administration and defense. This was double the number (813,000) employed by such agencies in 1951.

Another basic cause of Britain's financial crisis has been its failure to keep up with the rest of the world in efficiency of production and distribution. This is evidenced by (1) its relative decline in GNP per person; (2) its relative increase in imports as compared with exports: (3) its low production per worker for specific products; (4) curtailment of productivity by its labor unions; and (5) its declining share of the world's steel production.

A third cause of Britain's financial crisis in 1976 has been the excessive taxation of profits and personal income. Under British law, profits of corporations may be taxed up to 52 percent. This law has discouraged both the investment needed to modernize plants and equipment of the older industries and the entry of new industries.

The personal income tax in Britain is graduated up to 83 percent of a person's income and is much higher than that of many other countries. Because of this, many high-income individuals have left Britain.

Dr. Roland W. Bartlett is professor of agricultural economics emeritus, University of Illinois at Urbana-Champaign. His major academic career has been in teaching, research, and extension in dairy marketing, but over the years his interests have also extended to labor problems and foreign trade policies. He has served as consultant to the US Departments of Justice and Agriculture, the government of British Columbia, and Washington State University. He is the author of the recently published *American Foreign Policy in Perspective.*

GNP per Person Lowest of Six Industrial Nations

When James Callaghan became prime minister of Britain in 1976, he inherited a sluggish economy. This is evidenced by the relative decline in its consumer income and its slow growth rate.

In 1959, Britain ranked third in GNP per person for six industrial countries (see Table 1). By 1976, it had fallen to sixth place. From 1959 to 1976, the growth rate of GNP per person in Britain was roughly one-fourth of that in Sweden, Switzerland, and West Germany. Britain has failed to keep up in productivity with other industrial countries during the past two decades.

Britain's Failure to Meet World Competition

Over a long period of time Britain has failed to meet world competition in the production of basic commodities necessary for an expanding economy. Britain's declining share of the world production of steel furnishes a classic example of its failure to meet world competition.

In 1965, for example, Britain's share of the world's steel production was 6.2 percent. By 1974, its share had fallen to 3.2 percent, one-fifth as large as Japan's pro-

portion (see Table 2). As late as 1914, Japan's steel production was too low to be listed. Like Britain, most of the iron ore used in Japan's steel production was imported. In recent years, Japan has been a rigorous competitor in the steel industry.

The major part of the steel industry in Britain was taken over by the government in 1970 as a result of losses being sustained by private steel firms. Up to the present (1977) the government, which now produces 80 percent of the steel in Britain, has had no marked success in improving efficiency in the industry. In 1974, British steel production was 21 percent below that of 1970. Since 1970, the steel industry in Britain has been plagued with numerous strikes, further thwarting attempts to increase efficiency.

Britain's Low Productivity per Person

Productivity in Britain's steel industry for a long time has been below that of some other countries. The Paris Conference of 1947–48 showed a wide difference in efficiency in industrial production among countries. That conference showed that a steel worker in the United States turned out about four times as much steel as a steel worker in Britain; a coal miner in the United States mined four times as much coal as a British miner, 25 carloads as compared with 6¼ carloads. The same conference showed an auto worker in the United States produced about four times as much as a British auto worker; and a United States textile worker turned out about 2½ times as much as a worker in Britain.

Labor Unions Have Curtailed Productivity

For over a century following the defeat of Napoleon at Waterloo in 1815, conservatives dominated the political and economic structure of Great Britain. In their greed for wealth and power, they exploited labor and retained most of the benefits of increased productivity for themselves. Several writers including Frederick Harrison, Thomas Huxley, and Jack London have dramatized conditions at the beginning of the 20th century, when 90 percent of people in Britain died in poverty. The book, "The Miners' Years of Struggle," published in 1953 by R. Page Arnot, depicts the struggle of the miners' labor union in Britain up to the middle of the 20th century. According to Arnot, its leaders fought to improve living standards of their members and to obtain justice for them in British courts.

Table 1. Gross National Product per Person, Six Industrial Countries, 1959 and 1976

Country	1959	1976	Percentage increase, 1959 to 1976
United States	$2,698	$5,500	104
Sweden	1,512	5,600	270
Britain	1,495	2,500	67
Switzerland	1,486	6,000	304
West Germany	1,418	5,000	253
France	1,395	3,400	144

Sources 1959, *Illinois Agricultural Economics*, January 1962 (Vol 2, No. 1), p 18 1976 *Champaign News-Gazette*, 21 April 1976

Table 2. Steel Production: Selected Countries and Years, Percentage of World Production

	1865	1914	1935	1965	1970	1974
United States	33.3	29.0	26.2	26.9	20.0	19.0
USSR	9.5	7.7	16.9	20.5	19.5	19.3
West Germany	23.3	25.5	20.0	8.3	7.6	7.5
Japan	..	..	5.9	9.3	15.7	16.6
United Kingdom	53.5	12.9	9.6	6.2	4.8	3.2

When the labor government came to power in 1945 following the close of World War II, labor unions in Britain began to attempt to bring about a more equitable distribution of income to worker members and to stop injustices to workers initiated over many decades by conservative vested interests. While they have brought about many needed changes, labor unions have initiated some policies that are proving harmful not only to Britain generally but also to union members themselves. Among these are the following:

(1) The *overtaxation of profits* already mentioned, with its discouragement of investment.

(2) *Excessive wage demands accompanied by industry-wide and nationwide strikes as well as innumerable wildcat strikes.* An example of this is British Leyland. This auto company, 95 percent owned by the British government, has had many strikes which have seriously curtailed its productivity. On 21 March 1977, the 120,000 workers in this company were told that closings are a possibility unless productivity increases soon.

(3) *Labor resistance to improved productivity.* In some situations, labor unions have perpetuated inefficiencies by refusing to adopt innovations that would lower unit labor costs.

One example of this was at Tilbury, a port for exports to Australia. Australia had found that unit labor costs could be greatly reduced by shipping products in containers. Container berths were needed at Tilbury. At first the labor union agreed to modern berths in return for higher wages. Later they reneged on this agreement and banned work on new docks until the same wage promised to Tilbury workers was given to all other docks, including the least efficient. Ship owners of the less efficient docks could not afford to pay the high rates promised at Tilbury so the whole deal was turned down.

As a result of failure of Tilbury to provide container berths, ship owners using containers diverted their vessels to Antwerp with an extra cost of $240,000 per voyage. With this diversion, Tilbury lost most of its exports to Australia and labor unions lost dock jobs of those formerly working at Tilbury.

Partial Loss of the Export Colonial Market

A basic factor causing the relative decrease in consumer income and a slow growth rate in Britain has been the partial loss of its export colonial market. Since 1960,

imports to Britain have exceeded exports. The average annual amounts that British imports exceeded British exports for specific periods were as follows (in millions of pounds sterling):

1960–64	76
1965–69	23
1970–74	518
1974	3,668
1975	1,657
1976	811

By 1972, the British Empire had shrunk from 12,960,000 square miles to 94,000 square miles. This was 0.7 of 1 percent of its size 60 years earlier. In 1912, the empire had a population of 439 million people, of which about 400 million were in the colonies. India, which with its 350 million people had been the largest colony, became an independent republic in 1950. In 1972, Britain had a population of 56 million people, or one-eighth that of the 1912 empire.

Historically, British policy had been to secure raw products from its colonies and sell manufactured products back to them at monopoly prices. Loss of its colonial market has forced Britain to compete on a world basis.

Added to Britain's loss of part of its export colonial market was the oil embargo of 1973, which caused a sharp increase in the cost of oil. By 1974, imports to Britain including oil exceeded exports by £3.7 billion. In 1976, imports were £811 million above exports.

Balance of Payments Related to Devaluations

For over a century prior to World War II the foundation for money values throughout the world had been the Bank of England and the pound sterling. Hence the decline in the value of the pound during the past three decades is striking evidence of the decline of the British economy. As stated earlier, the value of the pound sterling in Britain was stabilized in 1977 at \$1.72–\$1.74 in US dollars, or at about one-third of its value before World War II.

The decline in the value of the British pound in US dollars has been as follows:

Pre-World War II	\$4.80	
December 1946	4.03	(Devalued)
September 1949	2.80	(Devalued)
November 1967	2.40	(Devalued)
December 1971	2.61	
June 1972	2.57	
28 Oct. 1976	1.56	
5 Sept. 1977	1.74	

Devaluation of the pound in Britain has been closely associated with an excess of imports over exports. During the war years from 1940 to 1944, imports exceeded exports an average £728 million annually. In 1945, imports to Britain were £870 million more than exports. This situation led to the December 1946 devaluation.

Following this, Britain continued to be plagued by an unfavorable balance of trade. From 1945 to 1949, British imports exceeded exports an average of £291 million a year. On 18 September 1949, the pound was again devalued, to \$2.80.

Following that devaluation, Britain enjoyed a brief respite from balance of payments problems. From 1950 to 1959, British exports exceeded imports by an average of £105 million a year. Unfortunately this period of financial relaxation was brief. From 1960 to 1966, imports exceeded exports by an average of £61 million a year. In November 1967, Britain devalued the pound to \$2.40.

As observed earlier, the oil embargo and subsequent higher prices for oil put the finishing touches on the British balance of trade. In 1974, Britain suffered the worst trade deficit in its history with imports exceeding exports by £3.7 billion. The market value of the pound, which had increased to \$2.61 in December 1971, fell to an all-time low of \$1.56 in October 1976.

Loans to Britain negotiated by Prime Minister Callaghan stopped the downward spiral, at least temporarily, and resulted in a slight increase in the value of the pound to the recently relatively stable \$1.72 to \$1.74.

Some Future Possibilities for Great Britain

In the preceding discussion, Britain has been portrayed as a sick country. In reviewing these historical developments, one may well raise the question: What is the probable future of Britain as an industrial nation? Despite the current gloomy outlook for Britain, there are some bright spots in its industrial horizon. These include

(1) Oil production now flowing from offshore Scotland;

(2) The outstanding success of Imperial Chemical Industries, an efficient worldwide company with its headquarters in Britain;

(3) Increased foreign investment in Britain, exemplified by a new \$313 million engine plant being built by the Ford Motor Company in southern Wales; and

(4) Major emphasis on research and development.

New Oil. Unquestionably, potential income from offshore oil is an optimistic factor in the future of Britain. As the flow of oil increases, oil imports can be decreased, thereby bringing British imports more nearly into line with its exports. Furthermore, potential income from oil will buy time in which industrial and labor leaders will have an opportunity to adopt policies which may enable Britain to compete in world markets. During this period of grace, government leaders will also have time to review priorities in Britain's overexpanded public sector and, it is to be hoped, discard programs where performance fails to justify costs.

Imperial Chemical Industries. Bowed down with tradition, obsolescence, and high unit costs for many of its manufactured goods, Imperial Chemical Industries (ICI) has achieved a turnabout in Britain which deserves to rank as one of the most important management accomplishments of this century. The performance of the company, which has capital assets of \$7.9 billion and annual sales of over \$7 billion, may point the way for a new industrial revolution in Britain.

Engine Plant of Ford Motor Company. In September 1977, southern Wales landed a \$313 million engine plant from the Ford Motor Company. This was based upon a

good labor record in Britain and London's industrial incentives. The plant will employ 2,500 and generate jobs for 5,000 in related fields. Henry Ford II, the company chairman, said the decision was "an important vote of confidence in Britain's ability to improve its industrial performance."

Potential Industrial Expansion Through Research and Development. Fundamental and applied research is building a solid foundation for bringing about increased productivity and lower unit costs for British industries. Basic or fundamental research has moved almost completely into the colleges and universities, largely financed by government. Applied research is carried on chiefly by the faster-growing industries such as Imperial Chemical Industries.

A study made in 1963 showed that Britain has 285,000 trained researchers, or about a third of some 900,000 trained research people in Europe. This same study showed that research and development in 13 countries had brought Western Europe far ahead of the Soviet Union in science and technology and only a step behind the United States in many fields. Britain and France led the European countries in spending for fundamental research, a shift from the traditional centers of scientific expertise from such countries as Germany and Switzerland.

Developments such as these suggest that despite its current sickness, it is not impossible that Britain may be able to regain its place among the industrial nations of the world.

Agricultural and Food Policy — Issues and Decisions

R. G. F. SPITZE

The President signed the Food and Agriculture Act of 1977 in September of last year. It is expected that this legislation will have a significant impact on US farm producers, food and fiber consumers, traders, taxpayers, and other nations. This article presents a conceptional and historical backdrop against which the policy provisions in the Food and Agriculture Act of 1977 can be considered.

The Policy Model

Current policy developments can be viewed within a system of concepts through which we can understand policy classification, formation processes, and implications (Chart 1). Given a problem situation, policy may be viewed as an identifiable decision and action to achieve a desired end. Thus conceived, it encompasses most of what people and their institutions do. When policy arises from individuals and interest groups, it can be seen as *private policy.*

However, not all problems of society seem to be solved by private policy. Conflicts persist; community goals remain unattained; and socioeconomic externalities exist. When policy emerges from many individual and group interests through compromise in representative governments, it can be seen as *public policy.* A major responsibility of public agricultural research and education institutions is the creation and dissemination of dependable knowledge to help citizens fashion their own policy.

Public agricultural and food policy as an area seems to be evolving as a merger of early farm policy, then agricultural policy, and recently food policy. The concerns in the first century of our nation's history were focused on developing a productive agriculture. But in the past quarter-century, the focus of public interest has shifted toward food. In particular, consumers have called attention to their apprehensions regarding the quality, availability, and cost of food. *Public price and income policy* represents yet another evolution within agricultural and food policy. That is, early public interest in issues of land and conservation, education and research, credit, and marketing gave way in the 1920s to concerns about prices, incomes, consumers, trade, and Treasury transfers.

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Why Continued Public Price and Income Policy

The 1977 act adds to a succession of public price and income policies. The Agricultural Marketing Act of 1929 (Federal Farm Board) represented our first attempt in this area. It was followed by, among others, the 1933 Agricultural Adjustment Act, and most recently the Agricultural and Consumer Protection Act of 1973. Ap-

Table 1. Percentage Changes in US Farm Output and Productivity with Comparisons[a]

Periods	Changes in output		Changes in output per worker hour		Changes in farm productivity
	Farm output	Private nonfarm business	Farm	Private nonfarm business	(Output per unit of input)
1950–55	12.2	21.2	32.4	11.8	9.6
1955–60	9.6	11.9	44.4	9.7	15.0
1960–65	7.7	28.2	36.9	19.2	10.9
1965–70	3.1	16.0	25.8	7.8	- 1.0
1970–75	12.9	9.9	25.9	6.0	11.9

[a] Total change during the five-year interval indicated from previous year
Sources. Derived from data published by USDA and US Department of Labor

parently, this policy stream has continued because problems have persisted.

Importance. The agricultural and food sector remains important economically notwithstanding our increasingly urbanized, industrialized economy. It is true that some measures suggest that agriculture has become less important. Farm production has dropped from 11 percent of gross national product in 1950 to 6 percent in 1976, and food and clothing has declined from 39 percent of consumption to 28 percent. During the same period the farm population has fallen from 15 percent of the total to 4 percent. Even so, this sector essentially supplies the nation's population with raw food, plus an additional net agricultural export of $12 billion for 1976. The agricultural surplus wiped out a nonagricultural trade deficit and left a $3.5 billion net balance.

Productivity. Farm production continues a favorable record of productivity (Table 1). Aggregate farm output has increased between 10 percent and 13 percent over the five-year intervals since 1950 with the exception of the 1960s during which a public policy of production control set aside 55–65 million acres of cropland (from a total of 350 million) annually to relieve excess supply. There was a much higher pace of output growth in our expanding nonfarm economy. Farm productivity and worker productivity has also been impressive, the latter consistently higher than nonfarm.

Price and Income Levels. The price instability and income level problems that have underlain public policy for over a quarter-century continue to plague the sector (Chart 2). Product prices received by farmers reveal greater variability than wholesale prices generally; total farm per capita incomes vary from 58 percent to 109 percent of the nonfarm; consumer food prices are slightly more unstable than consumer prices generally (CPI). The terms of trade between prices received and prices paid turned adversely from 1960 to 1971 and from 1974 to the present. For two years, 1973–74, the terms of trade and income were at record favorable levels.

Are the recent lush years the vanguard of the future or will depressed prices and incomes of the past return with a vengeance? The future price and income levels are related to the balance between US agricultural supply and demand. For 1976, the increase in agricultural output was 2.6 percent. To balance this, population increased 0.7 percent and the income effect is estimated to be 0.4 percent, leaving 1.5 percent of the additional supply to be met by new net exports and acquisition. Yet net exports showed no real increase. Price elasticity concepts suggest that such a margin would likely result in more than a 5 percent erosion of prices. In fact, by the fourth quarter, farm prices had declined 6 percent over the year and total net income had also dropped. The presence of the price and income problem is vivid.

The stage is set for a further integration of agricultural and food issues. Concern over food was dramatized internationally in the World Food Conference and has been intensified domestically by nutritional deficiencies highlighted by investigations of the Senate Committee on

Chart 1. Classification of Policy

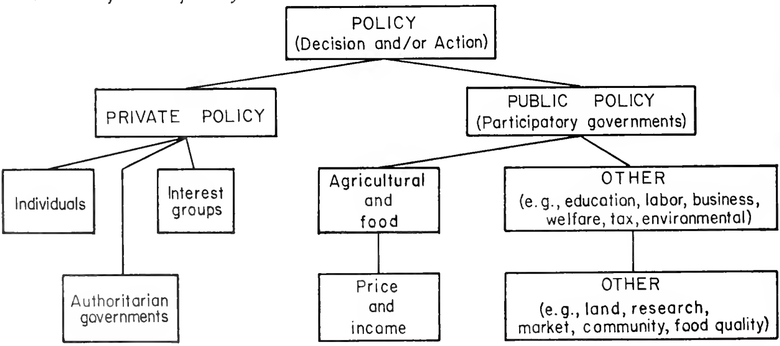

Table 2. Summary of Provisions of the Food and Agriculture Act of 1977

ITEM	PROVISIONS	IMPLICATIONS
DURATION	Four years, 1978-1981.	Issues settled for few years.
FOOD DISTRIBUTION Domestic	Food stamp program continued. Maximum $6.2 bil./yr. budgeted. Partial purchase requirement for stamps eliminated. Work requirement for able recipients to be eligible. Benefits reduced for high and raised for low income.	Slows cost escalation. Increases participation. Serves needy better. Simplifies administration Attempts to reduce fraud.
	Women, infants, children (WIC) program continued.	Improves nutrition of pregnant women and infants.
Foreign	"Food for Peace," P L 480 continued. Requires more reporting of bids, payments, sales Permits distribution of products not in "surplus."	Attempts to reduce fraud Permits food aid in addition to just surplus disposal.
GRAIN RESERVES	Farmer-held reserve mandated with some discretion for Sec. 3-5 yr. extended loans available for grains. Wheat extended loan reserve must be 300-700 mil. bu. Reserve may be induced by free storage and interest. Farmer redemption of loans may be discouraged by penalty when prices below 140% loan, may be induced by fewer benefits when prices 140-160% loan, and forced when prices 175%. Govt. stocks resalable at 115% loan if no outstanding loans of that product; 150% otherwise.	Insures govt.-farmer controlled reserve for security of consumer, export market, and aid. Permits recall loans and resale govt. stocks during high prices and low reserves. Reduces high and low extremes of farm prices.
COMMODITIES Wheat	Price support (non-recourse loan), minimum: 1977 — $2.25/bu. 1978-81 — $2.35/bu. (may be lower by 10%/yr. to $2.00 if supplies heavy)	Increases stability of producer and consumer food prices. Results in stocks and possible reserves. Raises minimum export prices and provides stocks for possible exports.
	Target price assures national aver. return on planted acres within farm allotment to producers meeting any set-aside and other conditions: 1977 — $2.90/bu. 1978 — $3.05/bu. (1.8 bil. bu. harvest or less) — $3.00 (more than 1.8 bil. harvest) 1979-81 — escalates with rise in variable costs.	Maintains minimal producer incomes at levels somewhat related to rising costs of inputs. Results in variable govt. payments to producers.
	Set-aside out of current year's planted and normal crop acreage may be a condition for benefits: 1978 — 20% set aside (by Secretary of Agriculture)	Reduces large supplies relative to demand by voluntary action.
	Disaster payments available 1978-79 if plantings prevented and yields low due to natural occurrences.	Govt. payments reduce producer risk due to nature.
Corn (support on other feed grains proportional)	Price support (non-recourse loan), minimum: 1977 — $2.00/bu. 1978-81 — $2.00/bu. (as wheat, may be lowered to $1.75)	Implications are same as for wheat, with price support also increasing stability of livestock prices.
	Target price (same conditions as for wheat) 1977 — $2.00/bu. 1978 — $2.10/bu. 1978-81 — As wheat, will escalate with costs.	
	Set aside out of current year's planted and normal crop acreage may be a condition for benefits.	
	Approach to disaster payments same as for wheat.	
Soybeans	Price support only, minimum: 1977 — $3.50/bu. (by Secretary of Agriculture) 1978-81 — Loan mandated but level at discretion of Sec.	Same as for corn, but no minimum mandated.
Cotton, rice, peanuts, sugar	Price support loans, target prices and/or set-aside established for each commodity	Effects similar to above but vary with combinations.
Payment limitations	Combined wheat, feed grain, cotton target payments limited (rice higher): 1978 — $40,000; 1979 — $45,000; 1980-81 — $50,000	Inducement for large producers to set aside is proportional to height of limit — and so are equity concerns.
Dairy	Price support dairy products continued, minimum: Until March 31, 1979 — 80% to 90% parity After March 31, 1979 — 75% to 90% parity	Same as for wheat, but effects are more direct to food consumers
	Adjusted semiannually through March 31, 1981.	
Wool and mohair	Price deficiency payments continued for all production at 85% of formula rate (figures at about 99¢/# for 1977).	Govt. payments to producers. Less dependence on imports.
RESEARCH AND EXTENSION	Funding ceiling increased for 5 years, emphasis on competitive grants, USDA lead role, human nutrition, veterinary schools, small farm help, 1890 colleges, solar energy, alcohol extraction, advisory groups roles.	Increases food and agriculture funds, relying more on grant approach and centralized administration.
ADDITIONAL ITEMS Export embargo	Secretary must raise price support to 90% parity upon suspension of normal exports of product with loan program.	Discourages public disruption of commercial exports.
Multi-year set-aside (if necessary)	Secretary may have multi-year set-aside contracts for feed grains, wheat, cotton.	Encourages permanency, conservation, sediment control.
Farm storage	Loans for farm product drying, storage, and handling.	Encourages loans and reserves
Conservation	Funding eased for major soil conservation projects.	Encourages erosion control.
Grain inspection	Funding for grain inspection supervision.	Facilitates new program.

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Nutrition. As a final impetus to policy development, the 1973 act was due to expire on 31 December 1977. This meant that P.L. 480 was facing termination, and that grains, cotton, dairy, and wool programs would revert to an earlier policy of higher price supports and no effective production control, which few people wanted.

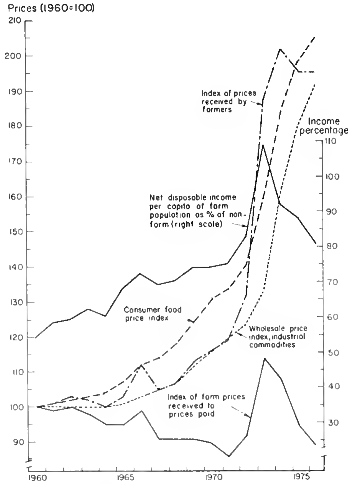
Processes and Alternatives

The complex public policy formation process gained speed soon after the national election in November 1976. Proposals, positions, and studies were issued by general farm and commodity organizations, consumer, labor, business and citizen groups, the farm press, political candidates and parties, community meetings, professional workers, and congressional staffs. The alternatives commonly considered were (1) simple extension of the relatively minimal impact 1973 act; (2) a dismantling of essentially all public price and income policy; or (3) even greater expansion of public involvement.

By the time the new 95th Congress was organized in early 1977, 37 specific bills had been introduced, including a pivotal bipartisan proposal by Senators Talmadge (D) and Dole (R). The Senate Committee on Agriculture, Nutrition and Forestry took the lead by launching public hearings in February. These continued for 17 days with additional in-the-field sessions. Secretary Bergland presented Administration views. The committee then met 19 April–4 May in mark-up sessions to work out its compromise. The full Senate adopted its version of the new policy (S. 275) on 24 May 1977. The House committee followed similarly, with a total of 72 days on a bill (H.R. 7171) which was adopted by the House on 28 July 1977.

After days of negotiation, a conference version was agreed to on 5 August 1977. The Senate approved on 9 September 1977, by a vote of 63 to 8, followed by a 283–107 favorable House vote on 16 September. Cast in the middle ground, this final version embodied less assistance than originally sought by the Congress, but with higher Treasury cost than desired by the President. It was truly a compromise. President Carter signed the Food and Agriculture Act of 1977, to set the course of public price and income policy in the agricultural and food sector for the next four years.

Chart 2. Price and Income Trends



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Provisions and Implications of New Policy

The Food and Agriculture Act of 1977 proceeds along a path charted in the early 1960s, involving price supports, direct payments, voluntary production control, and food subsidization (both domestic and foreign). Its chief purposes may be capsuled as (1) price stabilization and income assistance to farm producers; (2) food availability to domestic consumers through an assisted and a stabilized market; and (3) agricultural export availability through price stabilization, reserves, and assistance (Table 2).

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Economic Activity Moderates

A sense of *déjà vu* accompanies an investigation of recent economic statistics. As was the case last year, unusually bad weather has had a pronounced, short-run impact on the economy. As was the case last year, energy shortages have played a prominent role in cutting back activity. Thus it is still important to distinguish between short-run, transitory, and quickly reversible developments on the one hand, and longer-term, persistent, underlying trends on the other hand.

Notwithstanding recent shortfalls, I believe that the economy will continue to register strong gains. Despite reductions in output, employment has moved higher and unemployment has declined. Also in evidence are some unwanted symptoms of continued strength in the economy: the rate of inflation has quickened and interest rates have edged upward. Monetary developments continue to provide a background for economic expansion.

Output Has Slowed

Winter weather conditions, cutbacks in auto production, and the coal strike pushed industrial output down sharply at the start of 1978 (see chart). January's 8.4 percent annual rate of decrease was the most severe since March 1975. Slower sales of domestic automobiles led to a reduction in auto production.

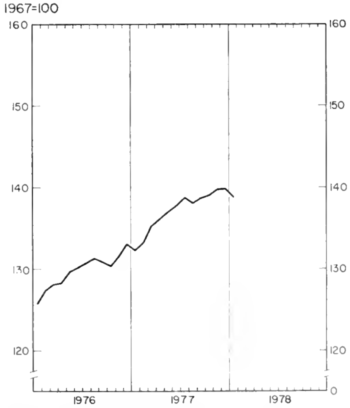
I expect industrial output to rebound sharply, but available statistics offer no comfort. Durable goods orders were down sharply in January. The decline, led by a huge decrease in new orders for defense equipment, was the steepest in three years. Orders for nondefense capital goods also decreased significantly. Fortunately, both of these areas showed large gains in December.

Home building dropped sharply in January, reflecting adverse weather. Although the January pace was 11 percent above the year-earlier rate, housing starts were down nearly one-third from December. The seasonal adjustment process is so important with the housing starts statistics that small changes in actual starts introduce wide swings in the seasonally adjusted series. Hence, there is little reason to believe that there is a serious weakness in this industry.

Labor Market Has Improved

The nation's unemployment rate dropped at the beginning of 1978 to its lowest level since October 1974.

Industrial Production



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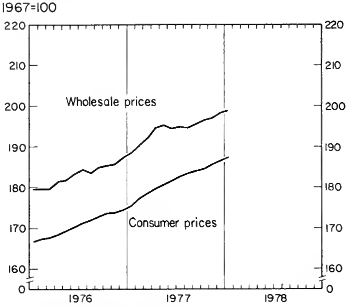
Wholesale and Consumer Prices



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This strong improvement came on the heels of December's significant decrease in the jobless rate. With the unemployment rate now at 6.3 percent of the work force, the continuing decline gives further credence to the Administration's projection of a year-end jobless rate below 6 percent. The jobless rate for adult women registered a decline from 6.6 percent to 6.1 percent, capping the impressive gains women made in the labor market in 1977. Accompanying the welcome fall in unemployment was another record for the number of persons employed. Employment rose to nearly 93 million in mid-January, up 272,000 from December.

The Department of Labor relies on a national survey of 56,000 persons to estimate the jobless rate. Prior to January, this poll covered only 47,000 persons. The larger survey is part of government's ongoing effort to provide improved economic indicators.

Spending Has Moderated

Retail spending dropped precipitously in January. Severe weather was blamed for the decline. But, in any event, this series is extremely erratic, and one month's data must be interpreted with care. Industry officials blamed the decline in auto sales on the winter storms. However, import sales jumped sharply during the same period.

A recent Commerce Department survey pointed to sluggish business spending on plant and equipment in 1978. Businesses expect expenditures to increase 4.5 percent this year, only about half the increase needed to fuel GNP growth of 4 percent. Although other surveys point to slightly greater investment increases, none matches the 1977 increase (8.7 percent).

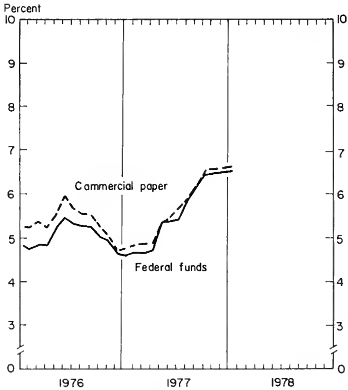
Inflation Has Accelerated

The newly developed finished goods price index is stressed by the Labor Department because it avoids the double counting of price increases that plagues the wholesale price index. In January, the overall wholesale price index rose at nearly an 11 percent annual rate (see chart). The finished goods index rose at a 7.2 percent annual rate. The chief push to higher wholesale prices came from cost increases in the early stages of production, with higher prices for unprocessed crude materials and intermediate goods accounting for most of the inflationary pressure. Consumer prices rose at an 8.4 percent annual rate in January.

Price increases at the wholesale level began accelerating in the fall. There is a view that some time is required before price increases at early stages in the production process are transmitted through to the retail level. If

Continued on page 12

Interest Rates



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Local Illinois Developments

Illinois Gross State Product

Though many Illinois residents are familiar with the concept of gross national product (GNP) and its estimates, fewer are aware of the Illinois state equivalent, the gross state product (GSP), and its magnitudes. GSP is the value of all goods and services produced in Illinois during one year. The Illinois Department of Business and Economic Development has recently released second quarter 1977 figures and revised 1976 calendar year estimates.

Illinois gross state product is estimated to have increased to a seasonally adjusted annual rate of $107.2 billion in the second quarter of 1977, a gain of nearly $3.1 billion over the first quarter. Manufacturing, services, and retail and wholesale trade accounted for most of the increase. Only agriculture suffered a decline.

In real (constant dollar) terms, GSP increased by $900 million, an annual rate of increase of 5.1 percent. This rate of increase was below the 5.8 percent recorded in the first quarter.

Estimates for the most recent year show GSP for 1976 to have been 10.4 percent above the figure for 1975. In constant dollars, the 1976 figure was 4.9 percent above that for 1975. For the 1966–76 decade, the current dollar rate of gain in 1976 was second only to 1973's 12.2 percent. These are considerably higher than the rates indicated in the previous report and are due to increases in the personal income figures published by the US Department of Commerce.

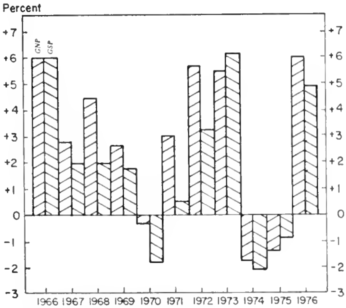
Over the 1961–76 period the average annual rate of real growth in Illinois GSP was 2.7 percent. The recession of 1970 had the effect of reducing long-term growth rates below the 4 percent level of the latter 1960s, and the 1974–75 recession further reduced the rates to less than 3 percent.

GSP estimates are also broken down by industry. The three major categories are private nonfarm, government, and agriculture. Fourth-quarter 1976 figures show the percentages of total GSP represented by these three categories to be about 88 percent, 9 percent, and 3 percent respectively. Private nonfarm includes seven subcategories which, in order of decreasing dollar magnitudes are manufacturing; wholesale and retail trade; finance, insurance, and real estate; services; transportation, communication, and public utilities; contract construction; and mining. Manufacturing, including durable and nondurable goods, is nearly twice the size of the next category and nearly 30 percent of the GSP. Government makes a contribution comparable with transportation, communication, and utilities. Agriculture weighs in slightly behind contract construction and is three to four times greater than mining.

Quarterly reports of the GSP are available on request from the Office of Research, Illinois Department of Business and Economic Development, 222 South College Street, Springfield, Illinois 62704.

GNP and GSP: Percentage Change from Preceding Period

(Constant dollar basis)



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Illinois Business Indexes

Item	Dec. 1977 (1967 = 100)	Percentage change from Nov. 1977	Percentage change from Dec. 1976
Employment — manufacturing[1]	n.a.		
Weekly earnings — manufacturing[1]	n.a.		
Consumer prices in Chicago[2]	180.0	+ 0.3	+ 6.4
Life insurance sales (ordinary)[3]	298.5	+11.5	+11.1
Retail sales[4]	259.4[a]	+17.1	+19.8
Farm prices[5]	192.0	+ 4.3	+ 0.0
Building permits — residential[4]	58.8	−49.1	+ 2.5
Coal production[6]	14.5	−85.1	−84.3
Petroleum production[7]	43.4	+ 3.3	− 2.8

[1] Ill. Dept. of Labor. [2] US Bureau of Labor Statistics. [3] Life Ins. Agcy. Manag. Assn. [4] US Dept. of Commerce. [5] Ill. Crop Rpts.; [6] Ill. Dept. of Mines. [7] Ill. Geol. Survey. [a] Preliminary. n.a. Not available.

The Alton Locks and Dam 26 Controversy

National attention has focused upon a debate concerning the replacement of a set of locks and a dam near Alton, Illinois. The controversy has become a symbolic battleground between economic and environmental interests. In fact, the debate now encompasses a more important question of national transportation policy.

The Alton Locks and Dam 26 are strategically located between the points where the Illinois and the Missouri rivers pour their traffic into the Mississippi. The structure, which is located 15 river miles north of St. Louis, is a vital link in the Midwest's river transport system. River traffic along 19 miles of St. Louis shoreline has spawned a regional economy which boasts a wide spectrum of manufacturing activity. Additionally, the many railroads and truck companies that operate there have made the area the second largest transportation center in the US.

The government entered the canal building business on a massive scale in the 1930s with the aim of both creating jobs and boosting competition against thriving railroad companies. Completed in 1938, Locks and Dam 26 were part of a nine-foot channel stretching along the Mississippi from the Ohio River to Minneapolis.

The Army Corps of Engineers cites two major problems with the Alton complex: inadequate locking capacity and structural deterioration. Between 1969 and 1974 the Corps was preparing plans for replacement of the structure with a new and larger 12-foot channel. The action was strongly opposed by the railroads and environmentalists, and in 1974 the Isaac Walton League, Sierra Club, and 21 western railroads obtained an injunction stopping construction bids. The plaintiffs claimed that the replacement was an initial step in a scheme to replace a whole series of locks and to extend a 12-foot channel stretching northward. In addition, the Corps did not file adequate environmental and economic impact statements, and there was some doubt whether the structure needed replacement.

The environmental groups assert that the Corps has emphasized commercial navigation at the expense of the environment — wing dike construction and dredging activity harm backwater areas which provide a habitat for wildlife. Additional traffic resulting from the 12-foot channel would also bring about increased turbidity of the water and contribute to pollution. The Corps consistently denies any plan for a 12-foot channel.

The railroads which compete along river routes complain that generous subsidies reduce barge operating costs, thereby giving the waterways an "unfair" competitive advantage. In general, subsidies to transport industries have been common. Computing 1976 subsidies as a percentage of revenues, the barge industry got 41 percent, compared with 3 percent or less for other modes.

Meanwhile, Locks and Dam 26 has become a costly bottleneck through which the traffic on the upper Mississippi and the Illinois rivers must pass. Because of its small size, barges in 1976 were forced to wait an average of nine hours for passage. During busy months, the delays can be several days in length. The Army Corps of Engineers asserts that the facility has critically deteriorated because of overuse.

Several studies have disagreed with the Corps's conclusion regarding a need for replacement of Locks and Dam 26. Some state that changes in locking efficiency would reduce costly delays. Several engineering studies have also concluded that the present facility can be repaired with minimum cost to the taxpayer.

Over 80 percent of the cargo shipped through Locks and Dam 26 is agriculture and energy related. About 56 percent of export grain moving from the upper Mississippi basin, approximately 28 percent of all refined petroleum products, and 31 percent of all fertilizers move by barge. Also, six power utility systems along the upper Mississippi — none having rail facilities — depend completely on the waterway for coal and oil transport.

The User Charge Debate

Congress is currently on the verge of enacting the first waterway user charge in the nation's history. Despite the fact that the past eight presidents have advocated some form of user fees, Congress has insisted on the operation and maintenance of 25,000 miles of channels without assessing the users. But public awareness of the fast-growing barge industry's free use and the growing expenditure of government for waterways coupled with the competitive impact of waterway subsidies on the railroads have led to a reevaluation of federal policy.

The Locks and Dam 26 project has become a symbol for the whole struggle over whether new waterway projects are necessary and whether government should pick up the bill. President Carter has threatened to veto any measure to replace the locks or dam which does not include user fees. What has emerged is a House-passed bill that approves a new $432 million lock and dam near Alton along with a nationwide fuel tax on commercial barges using the inland waterways. Starting 1 October 1979, diesel fuel used by commercial barges would be taxed 4 cents a gallon, with an increase in 1981 to 6 cents a gallon. This would raise about $50 million, or less than 10 percent of the federal government's annual waterway costs. A Senate bill favors a tax, phased in over a 10-year period, which would recover 100 percent of waterway operation and maintenance costs.

Estimates suggest that a 4-cent tax would increase diesel fuel costs by 10 percent and overall barging costs by 4 percent. Nevertheless, the National Waterways Conference, a broad-based waterways interest group, has endorsed the House plan, since beneficiaries are now "in a position stable enough to make a reasonable tax contribution to help maintain the public waterways." The Conference opposes the Senate plan.

The railroads, naturally, are firmly backing the plan for full cost recovery. MICHAEL TREBING

Comparative Economic Data for Selected Illinois Cities, December 1977

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS	n.a.	**3,397.2[a]**	**$49,101[a]**	n.a.	n.a
Percentage change from Nov. 1977		*+8.7*	*+17.9*		
Percentage change from Dec. 1976		*+0.2*	*+11.1*		
NORTHERN ILLINOIS					
Chicago	**$83,469**	**1,706.4**	**$37,898**	n.a.	n.a.
Percentage change from Nov. 1977	*+222.5*	*+12.4*	*+19.6*		
Percentage change from Dec. 1976	*+201.4*	*+0.2*	*+13.4*		
Aurora	**$ 2,277**	**150.5**	**$ 532**	n.a.	n.a.
Percentage change from Nov. 1977	*+8.5*	*+7.3*	*+14.9*		
Percentage change from Dec. 1976	*+159.6*	*+22.3*	*−3.1*		
Elgin	**$ 3,498**	**86.1**	**$ 645**	n.a.	n.a.
Percentage change from Nov. 1977	*+188.6*	*+10.6*	*+13.5*		
Percentage change from Dec. 1976	*+592.6*	*+3.1*	*+27.4*		
Joliet	**$ 1,836**	**314.7**	**$ 422**	n.a.	n.a.
Percentage change from Nov. 1977	*+20.8*	*−6.7*	*+29.0*		
Percentage change from Dec. 1976	*+249.7*	*−18.0*	*+9.3*		
Kankakee	**$ 339**	**76.2[b]**	**$ 243**	n.a.	n.a.
Percentage change from Nov. 1977	*+107.9*	*+12.5*	*+13.0*		
Percentage change from Dec. 1976	*+133.7*	*+2.2*	*+8.4*		
Rock Island-Moline	**$ 2,061**	**121.9[c]**	**$ 1,180**	n.a.	n.a.
Percentage change from Nov. 1977	*−76.5*	*+3.1*	*+11.1*		
Percentage change from Dec. 1976	*+26.8*	+1.8	*+9.7*		
Rockford	**$ 4,244**	**161.6**	**$ 1,065**	n.a.	n.a.
Percentage change from Nov. 1977	*+45.5*	*+11.2*	*+26.6*		
Percentage change from Dec. 1976	*+93.2*	*+1.7*	*+0.2*		
CENTRAL ILLINOIS					
Bloomington-Normal	**$ 3,229**	**45.2**	**$ 815**	n.a.	n.a.
Percentage change from Nov. 1977	*−7.8*	*+8.1*	*−0.9*		
Percentage change from Dec. 1976	*−52.7*	*+6.6*	*+7.0*		
Champaign-Urbana	**$ 388**	**48.6**	**$ 686**	n.a.	n.a.
Percentage change from Nov. 1977	*−84.0*	*+2.3*	*−4.5*		
Percentage change from Dec. 1976	*−75.1*	*−3.9*	*−5.6*		
Danville	**$ 564**	**41.0**	**$ 340**	n.a.	n.a.
Percentage change from Nov. 1977	*−2.0*	*+1.2*	*+20.9*		
Percentage change from Dec. 1976	*−28.6*	*+0.7*	*−27.8*		
Decatur	**$ 2,057**	**113.7**	**$ 524**	n.a.	n.a.
Percentage change from Nov. 1977	*−52.6*	*+0.6*	*+28.7*		
Percentage change from Dec. 1976	*+107.5*	*+7.7*	*−0.5*		
Galesburg	**$ 157**	**29.6[b]**	**$ 199**	n.a.	n.a
Percentage change from Nov. 1977	*−94.7*	*+4.2*	*+24.3*		
Percentage change from Dec. 1976	*−84.1*	*−4.2*	*+2.0*		
Peoria	**$ 6,976**	**184.3**	**$ 1,283**	n.a.	n.a
Percentage change from Nov. 1977	*+97.9*	*+6.9*	*−4.2*		
Percentage change from Dec. 1976	*−32.6*	*+8.3*	*−5.8*		
Quincy	**$ 316**	**43.2**	**$ 287**	n.a.	n.a.
Percentage change from Nov. 1977	*−21.7*	*+17.7*	*+42.7*		
Percentage change from Dec. 1976	*−50.0*	*+1.8*	*+12.1*		
Springfield	**$ 6,415**	**123.3**	**$ 1,826**	n.a.	n.a.
Percentage change from Nov. 1977	*+23.8*	*+20.2*	*+16.8*		
Percentage change from Dec. 1976	*+107.2*	*+3.3*	*+17.9*		
SOUTHERN ILLINOIS					
East St. Louis	**$ 39**	**26.9**	**$ 222**	n.a.	n.a.
Percentage change from Nov. 1977	*−60.6*	*+8.9*	*+46.0*		
Percentage change from Dec. 1976	*−81.2*	*+4.2*	*−6.3*		
Alton	**$ 265**	**66.8**	**$ 162**	n.a	n.a
Percentage change from Nov. 1977	*−6.6*	*+9.1*	*+26.5*		
Percentage change from Dec. 1976	*+1,052.1*	*+15.7*	*−0.6*		
Belleville	**$ 421**	**24.5**	**$ 499**	n.a	n.a.
Percentage change from Nov. 1977	*+14.4*	*+17.2*	*+15.2*		
Percentage change from Dec. 1976	*−52.1*	*+6.0*	*+43.8*		
Carbondale-Murphysboro	n.a	**32.7**	**$ 273**	n.a.	n.a.
Percentage change from Nov. 1977		*+6.1*	*+10.0*		
Percentage change from Dec. 1976		*−2.6*	*−11.3*		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports, accounting period ending 30 December 1977. [4] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Includes immediately surrounding territory. [c] Includes East Moline. n.a. Not available.

Economic Implications of Slowing Population Growth in Illinois

LARRY NEAL

What do you think has happened to the absolute number of babies born annually in this country since 1970? If you answered that the absolute number of babies born each year has dropped, you are among the few people who have remained immune to the scares of population explosion in this country. Even so, you may be unaware of the extent to which births have fallen. Table 1 shows the number of births annually in the United States and in the state of Illinois from 1967 through 1976.

The absolute number of births has been trending down since 1957 for the United States as a whole, and since 1959 for the state of Illinois. This downward trend was interrupted for two years, 1969 and 1970, for reasons which are still not clear. Since 1970, however, the trend has been resumed with a vengeance, finally bottoming out in 1973 at a level where it has remained for over four years. (The 1977 figures will show about 3.2 million births for the United States and about 170,000 for Illinois.)

Gradually, public awareness is spreading that the fears of runaway population growth which motivated the cult of zero population growth at the end of the 1960s were wildly misplaced. Even so, few people outside the limited circle of professional demographers perceive just how misplaced were the fears of another baby boom in the 1970s, one that would echo one generation later the baby boom of the late 1940s. Within that charmed circle of cognoscenti, moreover, there are all too many individuals who stated confidently, publicly, and frequently that Americans were having too many babies. They argued that special steps in the form of economic disincentives, social castigation, and outright persecution were needed to reduce the birth rate. For these people, the slightest remission in the sharply downward course of total births which has occurred since 1970 is cause to ring out the old alarms and to raise another scare about excess babies. On the other side of the ring, those who were professionally cautious about projecting runaway population growth in the 1960s remain even more cautious today about mentioning the rapid population decline which will occur if recent fertility changes continue for a few more years.

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Economic Causes of Declining Fertility

The decline in fertility during the 1970s came as a great surprise to nearly all demographers. Since the leading edge of the postwar baby boom reached the prime childbearing ages of 20–24 during the years 1966–70, most demographers anticipated a reversal of the decline in births during the late 1960s. Moreover, since the postwar baby boom in absolute numbers had not peaked until 1957, they expected the upturn in births to continue

Table 1. Number of Live Births Annually, United States and Illinois, 1967–76
(Thousands)

Year	United States	Illinois
1967	3,555	196
1968	3,535	193
1969	3,630	196
1970	3,739	205
1971	3,556	196
1972	3,258	178
1973	3,137	169
1974	3,160	169
1975	3,149	169
1976	3,165	168

Sources: US — Bureau of the Census, *Current Population Reports;* Illinois — Department of Public Health, *Vital Statistics.*

Table 2. Female Participation Rates[a] and General Fertility Rates,[b] United States, 1966–75

Year	Participation rates	Fertility rates
1966	45.4	91.3
1967	46.4	87.6
1968	46.9	85.7
1969	48.2	86.5
1970	48.9	87.9
1971	49.0	81.8
1972	49.9	73.4
1973	51.0	69.3
1974	52.1	68.4
1975	53.1	66.7

Sources: OECD, *Labour Force Statistics;* and US Department of Public Health, *Monthly Vital Statistics.*
[a] Women aged 15–64.
[b] Number of babies born per 1,000 women aged 15–44.

throughout the 1970s. So confident were they of these demographic realities, the report of the Presidential Commission on Population Growth and the American Future (1972) boldly stated, "there will be no year in the next two decades in which the absolute number of births will be less than in 1970." The experience since then shows, in direct contrast to this confident prediction, that there will be no year when the number of births will be as great as in 1970!

How could the demographers be so mistaken? The reason lies in part, perhaps, in a misplaced confidence in the stability of age-specific fertility rates. It is these fertility rates (the number of babies born each year per 1,000 women in the age group), combined with the present age structure of the population, which yield the various population projections. The Bureau of the Census projections for the United States (and the state projections derived from them) usually give three variants — one assuming higher, another assuming lower, and a final one assuming the same current fertility rates. In each case, however, the ratios which are chosen are held fixed for each age group throughout the period of the projection. They are assumed to respond to no other social forces, including economic variables. In recent years, however, the fertility rates for all age groups have proven to be very responsive to another important phenomenon — the participation rate of women in the labor force. Table 2 shows how this socioeconomic variable has risen in the past decade while the fertility rate of United States women has fallen. This table, incidentally, can be replicated for nearly every advanced society in the world, including centrally directed economies as well as capitalist. It seems to indicate, therefore, some type of universal human response to economic conditions in advanced societies rather than a temporary peculiarity or fad in the United States society.

Association does not necessarily imply causation, but in this case there are two separate, reinforcing lines of probable causation for the observed association. First, employment in a steady job raises the actual cost of a child for a woman and her husband by the amount of earnings she will have to forgo during pregnancy and at least the initial postnatal period. Whatever the positive benefits of children to their parents, an increase in their cost should yield a reduction in their numbers. Second, a reduction in the total number of children per household also reduces the amount of time required of the mother in the home. This increases to her the attractiveness of outside employment. In the late 1960s, a marked increase occurred in the participation rate of younger women in the labor force and the participation rate of other age groups (save for teenagers) also continued to rise. Interestingly, fertility rates have risen in the 1970s for only one age group — 18 and below — and this is the one age group where labor force participation rates have fallen. This has been due primarily to the raising of the upper age limit for mandatory schooling. In all other age groups the fertility rates have fallen dramatically, on an average of 50 percent in the past decade.

The full implications of this relationship between women in the labor force and their fertility patterns in the future have not been grasped by many demographers. The current argument is that women are merely waiting longer to start their families and when they do, they will have the same number of children as before. Forced to concede that age-specific fertility rates have been unstable, demographers are still reluctant to admit that total fertility rates might also be unstable. The longer women defer the start of their families, however, and the more seniority and higher pay they obtain in their jobs, the more expensive becomes the act of having children. The implication is clear that today's working women will have fewer total children over their lifetimes than did their mothers. Short-run fluctuations in fertility rates will continue to occur, but primarily in response to changes in the unemployment rates for women.

Projected Illinois Trends

Illinois has reflected faithfully these national fluctuations in total births. Projections of the Illinois population based on assumed constant fertility rates have fluctuated as well. In 1967, a study for the state's Department of Business and Economic Development projected a population in 1970 of 11,797,155 and in 1980 of 13,866,990. A second, median, projection gave 11,559,535 in 1970 and 12,880,179 in 1980. The third and lowest projection was 11,391,707 in 1970 and 12,556,055 in 1980. For the year 2000, the projections ranged from a low of 15,466,-669 to a high of 21,237,801. All these were based, of course, on the high fertility patterns still observed in the 1960s and the anticipation of high fertility rates for the maturing baby boom generation. Moreover, Illinois was a state of large net inmigration during the 1960s whereas during the 1970s it has become a state with a sizable net outmigration.

Projections made by the state's Bureau of the Budget in the mid-1970s have been quite different. In February 1975, a population of 11,377,000 was projected for 1980 and of 13,840,000 for the year 2000. Both these figures were considerably below even the lowest projection figure used in the 1967 study. Little wonder, since the actual population in 1970 turned out to be only 11,113,000, well

below the lowest projection figure for that date as well. In July 1976, the Bureau of the Budget revised its projections once more, since these projections are used by all the state agencies as the basis for planning future budget needs. For 1980, a slightly higher population of 11,448,832 was projected while by the year 2000 the population was projected to be 13,927,528. In December 1977, the projections were again altered, this time to a much reduced figure of 12,713,000 in the year 2000. These wild fluctuations in the estimates of population for the year 2000, from a high of over 21 million to a low of well under 13 million, have all occurred in the past decade.

Migration Patterns

Most of the fluctuations in the projections of Illinois population have arisen from the same source of variability in nationwide projections — the failure of the baby boom children to reproduce themselves as expected. For the state of Illinois, however, an additional source of variability arises which does not affect the national estimates. This is the change which occurs in the patterns of internal migration. In the 1970s, in contrast with the 1960s, metropolitan areas in the country have lost population as a result of internal migration. Overall, their absolute population levels have continued to rise because their natural increase is still greater than the loss of population from outmigration. In the period 1970–75, a net movement of nearly 1.6 million people occurred from the nation's metropolitan areas to its nonmetropolitan areas. In 1975–76, metropolitan areas lost another 400,000 via internal migration. Within the metropolitan areas, the central cities have continued to lose population in absolute levels, just as they did in the 1960s. Illinois showed very similar patterns during the period 1970–75, with absolute population in its metropolitan areas rising slightly in spite of greatly increased outmigration to nonmetropolitan areas. For the State as a whole, this new pattern of internal migration meant that every year thus far in the 1970s has seen a substantial loss of population due to migration whereas in the 1960s most years saw a net inmigration to the State. The net movement of people out of the State from 1970 through 1975 has been estimated as high as 342,000. This has kept the absolute rise in population of the State to only 17,000 during this period.

Only sample studies are available at this point to analyze more accurately the migration flows which have occurred in the 1970s from Illinois. The best such study to date used unpublished data from a 10 percent sample of participants in the federal social security program who have continuous work histories (C. L. Jusenius and L. C. Ledebur, *A Myth in the Making* [Washington: US Department of Commerce, November 1976].) These data omit the self-employed and agricultural, railroad, and public employees who do not participate in federal social security. In this sample, 43,300 people left Illinois for one of the states in the Sunbelt-South during the period 1973–74. This was a year of exceptionally large migratory movements. On the other hand, 37,900 people left one of the Sunbelt-South states to come to Illinois in this same period. The outmigrants from Illinois went primarily to Florida, Texas, and Tennessee. The inmigrants to Illinois came from the same three states for the most part. The experience of Illinois with respect to the Sunbelt-South is similar to that of the other states in the so-called Northern Industrial Tier. The much slower growth of population in Illinois and the northern industrial tier relative to the South and the Sunbelt has been due not so much to people actually moving from the North to the South in large numbers but more to the much higher rates of natural increase which exist in the South. The South generally has a population characterized by lower levels of education, less urbanization, and lower participation rates of women in the labor force — all conditions which have always been associated with higher fertility rates.

Nevertheless, these recent migration patterns appear historically unprecedented. There has been speculation that a new historical epoch is upon us during which the South shall rise again. All this ignores a very important historical precedent for the current movement of people out of the metropolitan areas and back to the countryside. This was the Great Depression of the 1930s. The migration patterns of the 1970s, in other words, may be nothing more than yet another piece of evidence that the depression of the 1970s has been the worst in this country since the 1930s and in many respects has been equally damaging. Loss of jobs in Illinois as a result of the depression may have caused many of the recent arrivals from other states who came during the 1960s to return to their rural origins. It is very likely, then, that short-run economic conditions explain much of the unusual migration patterns of the 1970s.

An interesting sidelight which helps confirm the important role of the economic depression rather than the allure of the sun is that the Illinois population aged 55 and above has actually been growing a bit faster than the national average during the 1970s. Rather than heading immediately for Florida or Texas upon retirement, most Illinoisans remain in the State with their family and friends (and medical services). This is also true for the overwhelming majority of retirees nationally.

Implications

What are the economic implications for the state of Illinois of these demographic changes? The answer has to be broken down into two parts — one corresponding to the long-run decline in fertility rates which Illinois is sharing with the rest of the nation, the other to the loss by migration of population to other states. Of the two aspects, the first is the more important for Illinois. The fall in births is a phenomenon with long-run implications for the nation as a whole. Any individual state can avoid these implications only if it is a state with much higher than average rates of inmigration or outmigration. Illinois has changed from a state with net inmigration to one with net outmigration. Since migrants are heavily concentrated in a relatively narrow age span among the young adults and their very young children, a state with high rates of net migration, either inward or outward, will find the age structure of its population becoming different from the national average. Compared with the

states with high migration rates, Illinois is not a large-scale exporter of people in the 1970s just as it was not a really important importer in the 1960s. The age structure of the Illinois population in 1975 was virtually identical with that of the nation as a whole, as it was in 1970.

The implications of the decline in birth rates are very encouraging for the Illinois economy during the next decade, just as they are for the national economy. Fewer babies, combined with the higher participation rates of women in the labor force, mean further increases in per capita income and consumption. Increases in per capita income have always been more important for creating new markets and consumer demands than increases in numbers of people. The pattern of consumption demands will be changed, of course, but the decline in demand for baby and children's goods, for example, will be more than offset by the rise in demand for convenience items for the working woman. Even in children's items, the dampening effects of fewer numbers will likely be more than offset by a rise in the quality of children's goods demanded.

Increases in consumption will likely induce a rapid expansion in capital stock once the effects have worn off of the sudden, sharp increases in the price of capital goods in the mid-1970s. These price increases were due mainly to the successive shocks of the environmental crisis and the energy crisis. It is unlikely these kinds of shocks will be repeated for some time, but one cannot blame business for maintaining a "wait and see" attitude for a while longer. In the meantime, there are so many new entrants to the labor force each year, thanks both to the maturing of the postwar baby boom and the much increased participation rate of younger women, it is more profitable to expand production by increasing labor inputs rather than capital inputs.

If this analysis is correct, the economic prospects in the next decade are quite bright. The demographic implications, however, are much different. The key to the economic prosperity of the 1980s is further increases in both the productivity and the participation rates of women in the labor force. If these increases do take place they will likely be at the expense of further drops in the fertility rates of American women. In other words, the fertility drop of the 1970s is not merely a short-run phenomenon which will be reversed very soon. It is likely to continue through the 1980s as well.

To conclude, the failure of the population of Illinois to grow more rapidly during the 1970s has been due to two factors: (1) the sharp drop in fertility in the State; and (2) the change from net inmigration to net outmigration. Both factors have economic causes. The drop in fertility is nationwide and is associated with a long-term economic change — the rising importance of women in the labor force. In Illinois, as in the nation, the economically depressing effects of a reduction in population growth from natural causes will be offset by the increased incomes which women will earn. Businessmen and public servants alike will have to adjust rapidly to the changes in the structure of economic and social demands which are now occurring. The loss of population from migration, on the other hand, is true of the northern industrial tier as a whole, but it is not large in scale and it is very likely short run in duration. It will be reversed when the national economy begins to grow rapidly again.

Alternative Mortgage Instruments — Who Wins?

CARROLL R. MELTON

Volatile home mortgage rates in recent years have induced both lenders and borrowers to seek relief in the form of reduced capital value risk for lenders and more manageable monthly payments for borrowers. One approach that has been employed is the use of mortgage instruments other than a loan with a fixed rate and an equal monthly payment amortization schedule. This paper examines three different types of alternative mortgage instruments (AMIs) in terms of their impact on both mortgage lenders and home owners.

The greater risk in mortgage lending in recent years has been, and will continue to be, that of capital value risk rather than default risk. (Foreclosures are typically less than 1 percent of the total number of mortgages outstanding.) Once funds have been committed, the financial position of the lender can be severely affected by a general price rise. Not only do the dollars that are repaid in subsequent years purchase less real goods and services, but persistent inflation drives up all interest rates, which depreciates the market value of the mortgage as well as reducing net flows of funds to mortgage lenders. It is not hard to see how the supply of funds for home mortgages could very quickly diminish in a period of rising prices.

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The financial intermediaries that specialize in mortgage lending, savings and loan associations and mutual savings banks, by prudent portfolio management could be expected to shorten the average maturity of their assets. As deposit inflows decline, this may be accomplished only by rejecting more applications or by liquidating existing assets on the secondary market. In the

past few years, the federally sponsored credit agencies — Government National Mortgage Association, Farmers Home Administration, and Federal Home Loan Mortgage Corporation — have not been aggressive participants in the secondary mortgage market. Agency purchases have averaged 12 percent of new mortgages over the past seven years, and some years have seen net reductions in their holdings. The response of lenders to these conditions has been to raise mortgage rates, increase down payment requirements, and effectively turn off the flow of mortgage funds. This became particularly acute in 1974 when conventional loan rates exceeded 9.5 percent and FHA loans were priced at over 10 percent.

Since almost all single-family houses are financed by selling a mortgage on the property, home buyers are hit in two ways by rising prices; not only do mortgage rates rise, but construction costs also rise. The major determinant in a decision to purchase a house is, of course, the amount of the monthly payment, not the purchase price or the interest rate. Even the term of the loan has a small impact on the monthly payment. On a $40,000 mortgage at 9 percent, increasing the term from 30 to 35 years will decrease the monthly payment by $8.27, a reduction of 2 percent. A 4 percent reduction can be achieved by extending the term from 30 to 40 years.

Types of Alternatives

It seems likely then that a mortgage transaction could be achieved which would be advantageous to both parties. The types of alternative mortgage instruments that are examined here are the variable-rate mortgage (VRM), the Canadian rollover mortgage (CR), and the graduated-payment mortgage (GPM). While all three types have specific advantages and disadvantages for both borrowers and lenders, their most important feature is that they provide more flexibility in mortgage financing and thereby facilitate the flow of funds in capital markets.

In the VRM, the interest rate is allowed to vary at the end of every six-month period on the basis of the change in an index of the cost of funds to the lender, which in effect indexes the yield on the loan. The choice of the index is crucial to the yield to maturity, since the differential between the loan rate and the cost of funds is assumed constant over the life of the mortgage in the case of one commonly used VRM. The cost of funds is typically some short-term interest rate, and as the spread between short- and long-term rates varies, the risk to the lender varies over the business cycle.

The monthly payment, of course, varies every six months as interest rates change. The borrower is being charged a rate that more fully reflects the cost of funds over the life of the loan and is not locked into one rate of interest. Neither the borrower nor the lender has a unilateral advantage in a variable-rate mortgage.

The Canadian rollover mortgage, so called because of its predominance in Canada, is renegotiated after a set period of time but is amortized over a longer period. A typical loan is amortized as if it were a 30-year loan with a balloon payment at the end of five years equal to the outstanding balance. In principle, the loan could be called at this point, but the usual practice is to refinance the balance as a 25-year loan at the then-current rate with another balloon payment in five years, and so forth. The most significant difference between the Canadian rollover and the VRM is that the new interest rate is determined purely by market forces at the rollover date rather than being rigidly linked to an index of funds. The element of risk arising from movements in interest rates is clearly reduced for the lender, who is able to make a new loan every five years at the current mortgage rate. The position of the mortgagor in comparison to a VRM is essentially unchanged — the time period between rate adjustments is simply longer.

The graduated-payment mortgage produces the most ambiguity for both the borrower and lender in terms of advantages and disadvantages. The monthly payment on a GPM is initially much lower than a standard mortgage but rises continuously over the life of the loan. The economic rationale for financing a house with a GPM is that the buyer's income is expected to rise over his lifetime and that it will be easier to purchase a house if the early payments are lower. The main disadvantage to the borrower is that the monthly payment is less than the interest payment. Unless the term of the mortgage is extended, the outstanding principal rises each month that the payment falls short of the interest charge. Principal repayment will not commence for several years. Should the buyer sell at any time before amortization of the principal occurs, he would face the unusual situation of having to repay in a lump sum more money than he borrowed.

The lender on a GPM is faced with a borrower who increases his debt for many years, thereby increasing the risk of defaulting. The lender must continuously extend more credit at a fixed interest rate over the same period, a distinct disadvantage when rates rise. A variant of the GPM, the graduated-payment mortgage with a variable rate, may be contracted. This type of mortgage would reduce the lender's interest-rate risk. As interest rates rise, however, the default risk would increase, since the unpaid interest which is added to the principal would rise faster on a variable-rate loan than on a fixed-rate loan.

A Comparison of Payments

The accompanying table shows the stream of monthly payments for six types of mortgage loans: fixed-rate (FRM), VRM, three-year Canadian rollover (3-yr. CR), five-year Canadian rollover (5-yr. CR), graduated-payment with a fixed rate (GPM-FR) and variable rate (GPM-VR). All of the mortgages are for a principal of $30,000 and a term of 30 years. The initial interest rate was the effective mortgage rate on new single-family homes in January 1970 of 8.34 percent. The monthly payment on the FRM is $227.28, which is constant over all payments. All of the other types result in unequal monthly payments.

In the variable-rate mortgage (VRM) and the GPM-VR, the interest rate is allowed to vary at the end of every six-month period on the basis of the change in the cost of funds to savings and loan associations published by the Federal Home Loan Bank Board. The initial rate

of 8.34 percent is 351 basis points above the cost of funds index, 4.83 percent in January 1970, and subsequent effective rates are also pegged at the same differential. The payment stream is calculated under the assumptions that the rate charged the borrower increases or decreases by the full amount of the change in the cost of funds and that the term of the mortgage loan is not lengthened at any point.

The payment streams show that excluding graduated payments, over this time period the three-year Canadian rollover results in the lowest average payment, $216.37 as compared with $227.28 for the FRM and $233.71 for the five-year Canadian rollover. The average payment on the VRM was $245.67, 8 percent and 13.5 percent higher than the FRM and the three-year Canadian rollover, respectively. Over the period January 1970 to June 1977, the mortgage rate ranged from a low of 7.47 percent in May 1971 to a high of 9.37 percent in December 1974.

A different time series of interest rates and cost of funds index would of course lead to different sequences of monthly payments, but the table does give some indication of the relative impacts of rate changes on the payment stream of alternative mortgage instruments. Because of the different features of the three main types of mortgages and their various ramifications for both the mortgagor and mortgagee, no one type of instrument is dominant. It is clearly in the best interests of the lender to make a loan with as much flexibility as possible to adjust rates to the current market rate and for the borrower to achieve a payment schedule consistent with his income and goal of increasing his equity in the property. Although these goals may at times be polar opposites, it seems likely that with the new types of mortgages that are being written some set of terms could be agreed upon which would be satisfactory to both parties. Something other than simply shutting off funds for mortgages should be possible.

The Future of AMIs

Despite the obvious advantages of these alternative mortgage instruments, they are not in widespread use. Current laws prohibit federally chartered savings and loan associations from offering them. Some states, though not banning them outright, do so de facto because of possible usury laws violations, especially with VRMs. The California experience with VRMs has shown a degree of consumer acceptance of AMIs. State-chartered S&Ls have bought approximately 200,000 AMIs worth about $8.5 billion, about 20 percent of all residential mortgages originated over the past two and one-half years.

Schedule of Monthly Payments for Six Types of Mortgages

Payment number	FRM	VRM	3-yr. CR	5-yr. CR	GPM-FR	GPM-VR
1	$227.28	$227.28	$227.28	$227.28	$149.41	$149.41
2	227.28	227.28	227.28	227.28	149.91	149.91
3	227.28	227.28	227.28	227.28	150.41	150.41
4	227.28	227.28	227.28	227.28	150.91	150.91
5	227.28	227.28	227.28	227.28	151.42	151.42
6	227.28	227.28	227.28	227.28	151.92	151.92
7	227.28	234.88	227.28	227.28	152.42	158.89
8	227.28	234.88	227.28	227.28	152.93	159.42
9	227.28	234.88	227.28	227.28	153.44	159.95
10	227.28	234.88	227.28	227.28	153.95	160.48
11	227.28	234.88	227.28	227.28	154.47	161.02
12	227.28	234.88	227.28	227.28	154.98	161.55
13	227.28	237.83	227.28	227.28	155.50	164.66
14	227.28	237.83	227.28	227.28	156.01	165.21
15	227.28	237.83	227.28	227.28	156.53	165.76
16	227.28	237.83	227.28	227.28	157.07	166.31
17	227.28	237.83	227.28	227.28	157.58	166.87
18	227.28	237.83	227.28	227.28	158.11	167.43
19	227.28	237.83	227.28	227.28	158.63	167.98
20	227.28	237.83	227.28	227.28	159.16	168.54
21	227.28	237.83	227.28	227.28	159.69	169.11
22	227.28	237.83	227.28	227.28	160.22	169.67
23	227.28	237.83	227.28	227.28	160.76	170.24
24	227.28	237.83	227.28	227.28	161.29	170.80
25	227.28	238.24	227.28	227.28	161.83	171.74
26	227.28	238.24	227.28	227.28	162.37	172.32
27	227.28	238.24	227.28	227.28	162.91	172.89
28	227.28	238.24	227.28	227.28	163.46	173.47
29	227.28	238.24	227.28	227.28	164.00	174.05
30	227.28	238.24	227.28	227.28	164.55	174.63
31	227.28	238.66	227.28	227.28	165.10	175.59
32	227.28	238.66	227.28	227.28	165.65	176.17
33	227.28	238.66	227.28	227.28	166.20	176.76
34	227.28	238.66	227.28	227.28	166.75	177.35
35	227.28	238.66	227.28	227.28	167.31	177.94
36	227.28	238.66	227.28	227.28	167.87	178.53
37	227.28	238.45	214 21	227.28	168.42	178.48
38	227.28	238.45	214.21	227.28	168.99	179.08
39	227.28	238.45	214.21	227.28	169.55	179.68
40	227.28	238.45	214.21	227.28	170.11	180.27
41	227.28	238.45	214.21	227.28	170.68	180.88
42	227.28	238.45	214.21	227.28	171.25	181.48
43	227.28	240.07	214.21	227.28	171.82	183.61
44	227.28	240.07	214.21	227.28	172.39	184.22
45	227.28	240.07	214.21	227.28	172.97	184.84
46	227.28	240.07	214.21	227.28	173.55	185.45
47	227.28	240.07	214.21	227.28	174.12	186.07
48	227.28	240.07	214.21	227.28	174.70	186.69
49	$227.28	$244.90	$214.21	$227.28	$175.29	$191.96
50	227.28	244.90	214.21	227.28	175.87	192.60
51	227.28	244.90	214.21	227.28	176.46	193.24
52	227.28	244.90	214.21	227.28	177.05	193.88
53	227.28	244.90	214.21	227.28	177.64	194.53
54	227.28	244.90	214.21	227.28	178.23	195.18
55	227.28	251.54	214.21	227.28	178.82	202.34
56	227.28	251.54	214.21	227.28	179.42	203.01
57	227.28	251.54	214.21	227.28	180.02	203.69
58	227.28	251.54	214.21	227.28	180.62	204.37
59	227.28	251.54	214.21	227.28	181.22	205.05
60	227.28	251.54	214.21	227.28	181.82	205.73
61	227.28	261.40	214.21	246.57	182.43	214.88
62	227.28	261.40	214.21	246.57	183.04	215.59
63	227.28	261.40	214.21	246.57	183.65	216.31
64	227.28	261.40	214.21	246.57	184.26	217.03
65	227.28	261.40	214.21	246.57	184.87	217.76
66	227.28	261.40	214.21	246.57	185.49	218.48
67	227.28	258.20	214.21	246.57	186.11	220.04
68	227.28	258.20	214.21	246.57	186.73	220.77
69	227.28	258.20	214.21	246.57	187.35	221.51
70	227.28	258.20	214.21	246.57	187.97	222.24
71	227.28	258.20	214.21	246.57	188.60	222.29
72	227.28	258.20	214.21	246.57	189.23	223.73
73	227.28	258.20	238.63	246.57	189.86	224.47
74	227.28	258.20	238.63	246.57	190.49	225.22
75	227.28	258.20	238.63	246.57	191.13	225.97
76	227.28	258.20	238.63	246.57	191.77	226.73
77	227.28	258.20	238.63	246.57	192.40	227.48
78	227.28	258.20	238.63	246.57	193.05	228.24
79	227.28	258.40	238.63	246.57	193.69	229.21
80	227.28	258.40	238.63	246.57	194.34	229.97
81	227.28	258.40	238.63	246.57	194.98	230.74
82	227.28	258.40	238.63	246.57	195.63	231.51
83	227.28	258.40	238.63	246.57	196.28	232.28
84	227.28	258.40	238.63	246.57	196.94	233.06
85	227.28	259.17	238.63	246.57	197.60	234.67
86	227.28	259.17	238.63	246.57	198.25	235.46
87	227.28	259.17	238.63	246.57	198.92	236.24
88	227.28	259.17	238.63	246.57	199.58	237.03
89	227.28	259.17	238.63	246.57	200.29	237.82
90	227.28	259.17	238.63	246.57	200.91	238.61
120	227.28	—	—	—	222.00	—
180	227.28	—	—	—	271.06	—
240	227.28	—	—	—	330.97	—
300	227.28	—	—	—	404.11	—
360	227.28	—	—	—	493.42	—

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Recent legislative moves may make the availability of AMIs more widespread. The Housing and Community Development Act of 1977 (P.L.95-128) passed 12 October 1977 amended the National Housing Act to allow unlimited amounts of graduated-payment mortgages to be insured by the FHA. Further provisions exempted those mortgages so insured from state usury laws. Recent hearings of the Senate Subcommittee on Financial Institutions considered proposals to extend VRM authority to federally chartered savings and loan associations. Although no specific legislation is being considered, the Congress at least appears to be interested in the possibility of widening the availability of alternative mortgages.

More extensive use of alternative mortgage instruments should be of benefit to both parties in residential mortgage financing. To answer the question posed in the title, it seems that everybody wins.

Economic Activity Moderates

Continued from page 2

such a relationship holds, we can expect little relief from inflationary pressures in the near-term future.

Monetary Developments Are Expansive

Monetary aggregates continue to expand rapidly. The money supply rose about 7.5 percent during the past year, somewhat more rapidly than during the two preceding years. The money supply plus time deposits — sometimes referred to as M2 — rose nearly 9 percent over the past year. This increase was little changed from growth rates in the first two years of the current economic expansion.

Interest rates have moved higher since late last year (see chart). However, such developments do not result from a tightening in monetary policy. Instead, rising interest rates reflect the acceleration in inflation, and continual strong credit demands. Business loans rose more than 8 percent over the past year, and have expanded at a 14 percent rate since last October.

WILLIAM R. BRYAN

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Bureau of Business and Economic Research College of Commerce and Business Administration University of Illinois

Economic Lull Continues

There has been a lull in economic activity so far this year, continuing the slowdown that characterized the final three months of last year. Production has stabilized; employment and income growth has moderated; and retail purchases have weakened. Although the rate of inflation has quickened, interest rates have leveled off.

Government economic actions have shifted toward less stimulation in the past several months. Monetary aggregates have declined on balance since early January. At the same time, federal expenditures have failed to keep pace with projections.

Output Growth Has Slowed

Physical output of the economy has slipped since the end of last year. Although industrial production rose at a 6 percent annual rate in February, the gain was insufficient to erase the previous month's shortfall (see chart). Production has been hampered by the unusually severe weather and the coal strike — both direct and secondary, or "ripple," effects. Even so, the February data show widespread, though modest, output gains — with increases in production of consumer goods, business equipment, and materials.

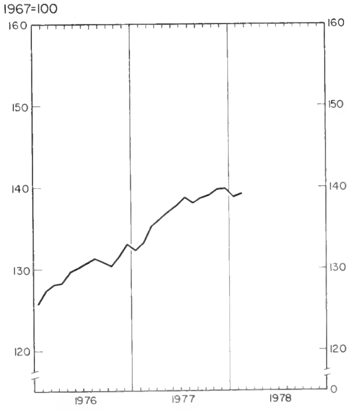
Home building statistics continue to present a bleak picture. February housing starts, at nearly a 1.6 million annual rate, were slightly above the January pace. Although recent home construction rates are more than 20 percent below the pace achieved during much of last year, it is premature to regard housing as a depressed industry. Recent changes are likely to reverse themselves fully in the next few months.

Labor Market Developments Are Mixed

Employment growth has slowed so far this year, but otherwise the labor market has registered improvement. Since December, employment has risen at a 2.6 percent annual rate. In the preceding year employment rose 4.7 percent. Changes in employment tend to be related to changes in physical output.

Unemployment has continued to drift downward even though employment growth has slowed. In mid-February, the unemployment rate reached 6.1 percent, down from 6.3 percent in January. The household survey (from which the employment-unemployment data are generated) was taken prior to the major impact of

Industrial Production



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Unemployment and Employment Statistics [illegible] Page 7

the coal strike. The survey showed improvement among nearly all labor market groups.

Aggregate Demand Has Weakened

Household spending has moderated since the end of last year. Retail sales have expanded slightly since January, but have declined at a 17 percent annual rate since December. In February, retail sales were 4.9 percent above their year-earlier pace. During the preceding year sales rose 9.3 percent. After removing the rise in dollar volume resulting from inflation, real purchases at the retail level have actually declined over the past year.

Business plans for plant and equipment expenditures are lackluster. According to the Commerce Department's survey taken in January and February, businesses plan to spend 10.8 percent more in 1978 than during 1977. However, prices of capital goods are expected to show a 5.3 percent rise. Thus, real capital expenditures will be up only 5.5 percent.

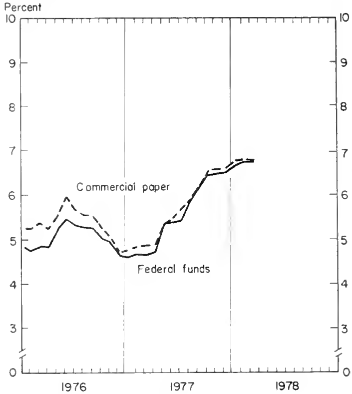
Capital spending plans have been adversely affected by bleak sales prospects — especially after adjustments for inflation. Also, utilization rates indicate that there is substantial excess capacity. Factories operated at 82 percent of capacity in February, down from 83 percent in December. Finally, business profits have been disappointing, although fourth-quarter after-tax profits were 1.3 percent greater than in the third quarter. Adjusted for inflation and for inventories at replacement costs, profits probably fell in the fourth quarter.

Demand for domestically produced goods and services by foreigners has been substantially less than domestic demand for foreign-produced goods and services. The trade deficit in 1977 reached $20.2 billion, more than twice the previous record in 1972, and 14 times greater than in 1976.

Inflation and Interest Rates Show Diverse Movements

The rate of inflation has risen rapidly since the end of last year. Since December, wholesale prices have jumped upward at more than a 10 percent annual rate, and consumer price increases have been near that rate. In the preceding eight months, consumer prices rose at a 5.1 percent rate and wholesale prices increased at a 3.2 percent rate. Although prices of farm products and processed foods have remained virtually unchanged on balance for more than three years, there have been episodes during which these prices have moved sharply upward — followed by declines. Recently, food price increases have accelerated. Since September, food prices have risen at more than a 15 percent annual rate.

Interest Rates



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Interest rates have remained remarkably stable thus far in 1978, as they did during the early months of last year (see chart). However, it is likely that interest rates will edge higher during the remainder of the year. Such a view is based on the belief that the recent lull in business activity is temporary, and that the economy will strengthen.

Monetary and Fiscal Actions Have Tightened

Monetary expansion has been stalled since the end of last year. The money supply (M1) has drifted downward since the first week in January, and has actually declined slightly since October. During the preceding half-year, money rose at nearly an 8 percent annual rate. These developments may be viewed as a tightening in monetary policy. However, unless money supply growth is limited for a substantially longer period, economic activity will not be adversely affected.

Fiscal actions have also tightened. Federal expenditures are running well behind the pace that had been anticipated. As a result, the forecasted budget deficit for fiscal 1978 is $53 billion, $8.8 billion below earlier projections. These developments do not result from an explicit policy decision. Instead, they reflect administrative difficulties in hewing to a budget plan.

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Local Illinois Developments

Illinois Coal Situation

In terms of normal productive capacity, Illinois stands fourth in US coal production (after Kentucky, West Virginia, and Pennsylvania) with a capacity of 278,757 tons per day. The United Mine Workers (UMW) account for 96 percent of output, compared with about 57 percent in the US as a whole. Since the start of the UMW strike on 6 December, production in the US has generally been cut about 50 percent; for the week of 25 February coal mined was about 49 percent of what it was in the same week last year. In Illinois, however, production was down in January to less than 1/20 of 1 percent of the level in November, the last month of full production.

Illinois is not only fourth in normal productive capacity, but it is also fourth in number of miners working, again after Kentucky, West Virginia, and Pennsylvania. In number of mines, on the other hand, while Kentucky, West Virginia, and Pennsylvania still are the top three states, Illinois is only ninth. Thus the number of men working in each mine is higher in Illinois than in any other leading coal-producing state. Illinois averages 205 men per mine, Kentucky 26, West Virginia 50, and Pennsylvania 40. UMW unionization is also lower in those three states; West Virginia approaches the Illinois percentage with 88 percent unionized, Pennsylvania follows with 60 percent, and Kentucky has the lowest percentage, 39.

The potential of Illinois is indicated by its place just behind Montana in recoverable resources. Though there are important differences between heating values of coals, the Btu value of Illinois coal is also only slightly inferior to that of Montana. These facts combined with the fact that about 80 percent of US coal consumption occurs east of the Mississippi River (and 35 percent in the five midwestern states of Ohio, Indiana, Michigan, Illinois, and Wisconsin) leave Illinois in a good position for future growth.

Following the Clean Air Act of 1970, the sulfur content of coal has become an increasingly significant factor in the evaluation of coal resources. Most of the low sulfur coal in the US is found west of the Mississippi River, and even though there is low sulfur coal in Illinois, it represents less than 3 percent of the total reserves which underlie the State.

Electric utilities are the principal market served by Illinois coal. In 1966, prior to the Clean Air Act, only small amounts of western coal was consumed by Illinois and midwestern utilities. However, by 1975 imported amounts were significant: Iowa with 41 percent, Illinois 33 percent, Wisconsin 26 percent, and Indiana 14 percent. Similar changes occurred with respect to industrial and manufacturing uses. Further, desulfurization technology does not seem to be reversing this trend. One consequence for the utilities has been increasing attractiveness of nuclear power.

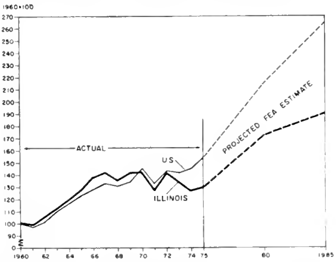
Thus, though Illinois occupies a potentially important place in future US coal production, the Federal Energy Administration predicts that Illinois growth will not keep pace with the national projected trends (see chart). Unless this pattern is reversed, markets are likely to shift increasingly to western low-sulfur coal.

Illinois Business Indexes

Item	Jan. 1978 (1967 = 100)	Percentage change from Dec. 1977	Percentage change from Jan. 1977
Employment — manufacturing[1]	n.a.		
Weekly earnings — manufacturing[1]	208.8	− 3.4	+ 5.6
Consumer prices in Chicago[2]	182.5	+ 1.4	+ 7.7
Life insurance sales (ordinary)[3]	n.a.		
Retail sales[4]	182.0[a]	−29.8	−26.4
Farm prices[5]	195.0	+ 1.5	− 1.0
Building permits — residential[4]	35.0	−40.4	+90.2
Coal production[6]	0.0	−82.2	−99.9
Petroleum production[7]	39.9	− 2.5	+16.3

[1] Ill. Dept. of Labor, [2] US Bureau of Labor Statistics, [3] Life Ins. Agcy. Manag. Assn., [4] US Dept. of Commerce, [5] Ill. Crop Rpts., [6] Ill. Dept. of Mines, [7] Ill. Geol. Survey
[a] Preliminary. n.a. Not available

Coal Production Growth Trend Statistics



Sources: Illinois State Geological Survey, FEA, and US Bureau of Mines.

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Petroleum Refining in Illinois

The demand for petroleum products has grown enormously in the past 25 years. In fact, per capita consumption has more than doubled since World War II. The most spectacular growth has been in the use of aviation fuels. Likewise, the demand for gasoline and industrial heating oils has risen in order to meet the energy needs of an increasingly mobile labor force and a growing economy.

It is only through the refining process that crude oil can be transformed into the many products which supply this country with one-half of its energy needs. In meeting these needs oil refining has become the nation's most capital-intensive industry with an investment of more than $108,000 for each employee. Moreover, refining technology has been developed to meet the needs for more efficient and clean-burning fuels.

About 46.5 percent of total US refinery output is gasoline; distillate and residual fuel oil account for 31.2 percent, and jet fuel 7 percent. Smaller quantities of a broad array of other products are also produced (asphalt, lubricants, kerosene, coke, and wax, for example). The product mix of any individual refinery depends upon its market area, competition, and many other economic considerations.

About 130 companies operate 270 refineries in the United States with a total capacity of 16 million barrels a day. The average refinery is, in general, significantly larger in terms of volume than the average facility in exploration and in gasoline retailing. In 1977 the average refinery processed about 60,000 barrels of crude a day. The following table gives the average size distribution (in thousands of barrels a day) of US refineries in 1976.

Size	*Average capacity*	*Percent of total capacity*	*Percent of refiners*
Less than 50	20	19.6	67.4
50–99	71	23.1	17.0
100–149	96	13.3	5.7
150–200	175	13.1	4.2
More than 200	305	30.9	5.7

A small number of very large refiners account for a disproportionate share of total capacity. However, these large refineries are owned by different firms within the industry. The top four companies account for about 32 percent of refining capacity and no one company has more than 9 percent of the total. Over the past five years, the share of the 10 largest oil companies has dropped from 65.6 percent to 59.5 percent. From 1973 through 1975, refiners of less than 10,000 barrels a day more than doubled their total capacity while capacity for the entire industry was growing by 11 percent. The accompanying map of major refinery locations and refined product pipelines shows current figures for Illinois.

Illinois Refineries

In 1975, 24 refineries were operating in Illinois. The nine largest of these (see map) are able to refine about 1.2 million barrels of crude oil a day — about 7.5 percent of total US capacity. Illinois ranks fourth among states in terms of total output. Current state employment is about 6,500.

The nine major plants comprise almost the entire refining capacity in the State. Most of the small refineries are run by fewer than 25 individuals and operations are limited to small distilling units. Several of the smaller refineries receive large subsidies through controversial provisions (called "small refinery bias") in the US Department of Energy's complicated oil entitlements program.

The major refiners are located in three distinct geographical areas in the State. Three refineries (owned by Shell Oil Company, Amoco Oil Company, and Clark Oil and Refinery Corporation) which are located together in Madison County near St. Louis account for about 37 percent of the state's capacity. Shell employs 1,700 persons; Standard 630; and Clark 300. The proximity of these three plants to navigable waters (the Mississippi River) enables crude oil and product shipments by barge, as well as by rail, truck, and pipeline. For instance, 35 percent of Amoco's total product is shipped by barge. Clark, which refines "sour crude" (high sulfur content), receives most of its oil from the Middle East and Venezuela via the Gulf of Mexico and pipelines.

Located near the Indiana border in the south-central section of the State are two more refineries which are owned by Texaco Incorporated and Marathon Oil Company. The Marathon refinery, which is located in Robinson and is the state's second largest refinery, employs 650 workers. The Texaco refinery is situated in Lawrenceville and employs 600 workers.

Four more refineries are located in the northern part of the State at Lockport, Blue Island, Lemont, and Joliet. These four plants are owned by Texaco, Clark, Union Oil Company of California, and Mobil Oil Corporation. Together they comprise about 40 percent of total state capacity. The Texaco refinery in Lockport employs approximately 800 workers; Clark 330; Union Oil 650; and Mobil 550.

Although some crude oil for Illinois refineries comes from the historic fields of southern Indiana and Illinois, most of it arrives through a sophisticated pipeline system which extends southward to Louisiana and westward to Wyoming. The Mississippi River and the Illinois Waterway enable barges to bring foreign crude from Venezuela, Africa, and the Middle East via ports on the Gulf of Mexico.

Illinois Crude

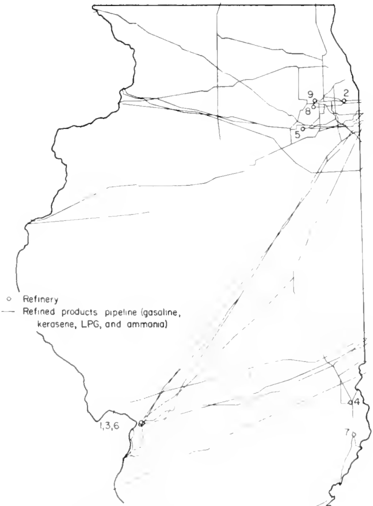
Illinois crude oil production contributes only a minor fraction of the total input of refineries located in the State. In fact, total Illinois production during an entire year is barely adequate to meet the annual crude petro-

leum needs of any one of the major refineries in the State.

Crude oil originating from Illinois wells (about 25.7 million barrels in 1977) accounts for just under 1 percent of total US production. In 1940 an all-time peak of 148 million barrels was reached. Output then declined but rallied to reach a postwar high of 82 million barrels in 1956. The state's petroleum production declined steadily between 1963 and 1975. In the period from 1969 to 1974 production fell at an average rate of 11.5 percent a year. In more recent years the total has stayed near 26 million barrels.

The number of drill-holes has more than doubled since 1973. This increase can most likely be attributed to the higher prices of crude oil. Additionally, in 1976 the Department of Energy (formerly the Federal Energy Administration) exempted stripper wells (those that produce less than 10 barrels a day) from federal price ceilings. This action can be expected to increase drilling activity and keep production from dropping further.

Major Refineries and Pipelines



Major oil refineries

	Company	Location	Capacity (bbl/day)
(1)	Amoco	Wood River	105,000
(2)	Clark	Blue Island	70,000
(3)	Clark	Hartford	55,000
(4)	Marathon	Robinson	195,000
(5)	Mobil	Joliet	175,000
(6)	Shell	Wood River	283,000
(7)	Texaco	Lawrenceville	84,000
(8)	Texaco	Lockport	72,000
(9)	Union	Lemont	150,000

Sources: Illinois State Geological Survey and US Bureau of Mines.

Bureau of Economic and Business Research

Increasing Regulation

Since the Arab embargo in 1973, petroleum-refining activities have been liable to increasing public supervision. The oil industry has been subject to varying degrees of price controls since August 1971 when general controls were levied. More stringent price regulations were imposed on the industry in response to the October 1973 embargo and the subsequent quadrupling of world oil prices.

Under Phase IV of the price control program the administration adopted the technique of "vintaging" for the pricing of crude oil. A two-tier price system with a ceiling price on "older" crude and market-determined price on "new" and "released" domestic crude oil was designed to encourage new exploration and production. Because not every refiner had equal access to old and new domestic crude oil, nor to domestic and imported crude oil, complaints of discrimination and charges of evading the two-tier pricing system through tie-in sales were often raised. A coalition of refiners who had not developed their own sources of domestic crude oil lobbied actively for a crude oil allocation program under which they would receive their "equitable share" of lower priced oil. A new government-mandated allocation program established the rights of refiners to lower-priced, domestic crude oil on the basis of historical contracts for deliveries in the base year of the program (1972).

In late 1974 the government inaugurated an "entitlements" program. Under it, refiners using more than the national average of "old oil" — oil from existing domestic fields at their 1972 rate of output — were required to purchase monthly "entitlements" from refiners that use less than the average. The purchase price of the entitlements reflects the difference in cost between the price-controlled old oil and the world price. The program was designed to allocate lower-priced domestic crude oil subject to price controls proportionately among refiners — those refiners using a high percentage of expensive foreign crude oil are compensated through the selling of their entitlements to refiners who used cheaper domestic (controlled) oil. One result was that refiners promptly began to import more foreign oil to run domestic refineries, thereby increasing their volume of crude oil and their share of the entitlements. Thus the program has had the effect of "subsidizing" imports of foreign crude. Congress also managed to make small refiners the largest recipients of this program. Opponents contend that the bias program has generated a proliferation of small inefficient refineries.

The resulting public dilemma is one of conflicting national energy policies. Consumers and producers want cheap energy and the oil industry wants high prices to justify expanded production. Through a combination of measures the price of energy to US consumers has been successfully held below the world level but only at the expense of creating "subsidies" for imports.

MICHAEL TREBING

Comparative Economic Data for Selected Illinois Cities, January 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$38,954[a]	3,746.7[a]	$41,014[a]	n.a.	n.a.
Percentage change from	Dec. 1977	n.a.	*+10.2*	*−16.4*		
	Jan. 1977	*−7.8*	*+5.0*	*+2.5*		
NORTHERN ILLINOIS						
Chicago		**$24,931**	**1,832.3**	**$30,950**	n.a.	n.a.
Percentage change from	Dec. 1977	*−70.1*	*+10.7*	*−18.3*		
	Jan. 1977	*+82.2*	*+2.5*	*+2.3*		
Aurora		**$ 511**	**145.0**	**$ 471**	n.a.	n.a.
Percentage change from	Dec. 1977	*−77.5*	*−3.6*	*−11.4*		
	Jan. 1977	*−22.3*	*−13.0*	*+6.8*		
Elgin		**$ 825**	**95.2**	**$ 506**	n.a.	n.a.
Percentage change from	Dec. 1977	*−76.4*	*+10.5*	*−21.5*		
	Jan. 1977	*−23.4*	*+3.3*	*+3.2*		
Joliet		**$ 451**	**425.6**	**$ 309**	n.a.	n.a.
Percentage change from	Dec. 1977	*−75.4*	*+35.2*	*−26.7*		
	Jan. 1977	*−49.6*	*+12.9*	*+9.5*		
Kankakee		**$ 97**	**122.7**[b]	**$ 185**	n.a.	n.a.
Percentage change from	Dec. 1977	*−71.3*	*+61.0*	*−23.8*		
	Jan. 1977	*−47.5*	*+62.3*	*+0.0*		
Rock Island-Moline		**$ 1,212**	**120.4**[c]	**$ 1,278**	n.a.	n.a.
Percentage change from	Dec. 1977	*−41.1*	*−1.2*	*+8.3*		
	Jan. 1977	*−60.2*	*+2.9*	*+2.3*		
Rockford		**$ 1,724**	**167.2**	**$ 840**	n.a.	n.a.
Percentage change from	Dec. 1977	*−59.3*	*+3.4*	*−21.1*		
	Jan. 1977	*+78.6*	*+2.9*	*−1.9*		
CENTRAL ILLINOIS						
Bloomington-Normal		**$ 695**	**48.1**	**$ 891**	n.a.	n.a.
Percentage change from	Dec. 1977	*−78.4*	*+6.4*	*+9.3*		
	Jan. 1977	*−65.9*	*+3.6*	*+11.3*		
Champaign-Urbana		**$ 2,241**	**49.1**	**$ 695**	n.a.	n.a.
Percentage change from	Dec. 1977	*+477.5*	*+1.0*	*+1.3*		
	Jan. 1977	*+566.9*	*+9.8*	*+9.7*		
Danville		**$ 332**	**47.0**	**$ 294**	n.a.	n.a.
Percentage change from	Dec. 1977	*−41.1*	*+14.6*	*−13.5*		
	Jan. 1977	*+207.4*	*+46.8*	*−20.7*		
Decatur		**$ 966**	**115.5**	**$ 433**	n.a.	n.a.
Percentage change from	Dec. 1977	*−53.0*	*+1.5*	*−17.3*		
	Jan. 1977	*+38.0*	*+10.5*	*+6.9*		
Galesburg		**$ 197**	**30.8**[b]	**$ 166**	n.a.	n.a.
Percentage change from	Dec. 1977	*+25.4*	*+4.0*	*−16.5*		
	Jan. 1977	*−97.6*	*−0.6*	*+7.0*		
Peoria		**$ 1,200**	**199.3**	**$ 1,175**	n.a.	n.a.
Percentage change from	Dec. 1977	*−82.7*	*+8.1*	*−8.4*		
	Jan. 1977	*−30.3*	*+8.0*	*+2.8*		
Quincy		**$ 371**	**44.5**	**$ 199**	n.a.	n.a.
Percentage change from	Dec. 1977	*+17.4*	*+3.0*	*−30.6*		
	Jan. 1977	*+95.2*	*+0.2*	*−8.2*		
Springfield		**$ 1,975**	**133.6**	**$ 1,687**	n.a.	n.a.
Percentage change from	Dec. 1977	*−69.2*	*+8.3*	*−7.6*		
	Jan. 1977	*+324.7*	*+3.0*	*−2.7*		
SOUTHERN ILLINOIS						
East St. Louis		**$ 28**	**28.1**	**$ 178**	n.a.	n.a.
Percentage change from	Dec. 1977	*−28.2*	*+4.4*	*−19.8*		
	Jan. 1977	*−76.0*	*+4.4*	*−0.5*		
Alton		**$ 372**	**78.3**	**$ 141**	n.a.	n.a.
Percentage change from	Dec. 1977	*+40.3*	*+17.2*	*−12.9*		
	Jan. 1977	*+481.3*	*+6.8*	*+18.4*		
Belleville		**$ 128**	**26.5**	**$ 394**	n.a.	n.a.
Percentage change from	Dec. 1977	*−69.5*	*+8.1*	*−21.0*		
	Jan. 1977	*+23.0*	*+2.3*	*+62.8*		
Carbondale-Murphysboro		**$ 698**	**37.5**	**$ 222**	n.a.	n.a.
Percentage change from	Dec. 1977	n.a.	*+14.6*	*−18.6*		
	Jan. 1977	*−90.8*	*+3.3*	*−8.6*		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 27 January 1978. [4] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Includes immediately surrounding territory. [c] Includes East Moline. n.a. Not available.

Unemployment and Employment Statistics — What Do They Really Mean?

JOHN B. PARRISH

Unemployment statistics, at least in the United States, are one of the most misunderstood of all economic data.

It is often stated that US unemployment is "shockingly" high when compared with other advanced industrial countries. Some assert that US teenage unemployment is "frightening," "disgraceful," "alarming," a "seething time bomb ready to explode." Going further, some argue that "high and sticky" overall domestic unemployment reflects the deteriorating ability of the free enterprise system to create enough jobs for all who seek them.

President Carter repeatedly stated during his 1976 campaign that US unemployment was "distressing" and "much too high." It was the nation's No. 1 economic and social problem. It represented the failure of the economic system in general and the policies of the previous administration in particular.

I submit that all these claims are simply not true and shall endeavor to explain *why* they are not true. I shall concentrate on five aspects: (1) international unemployment comparisons as reported in official statistics; (2) the real meaning of these international comparisons; (3) the special problem of US youth unemployment; (4) the unusual behavior of employment and unemployment in recession and recovery, 1975–76; and (5) some institutional factors tending to raise long-run unemployment rates in this country.

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He is coauthor of *The Labor Problem of American Society* and the author of numerous articles in the *American Economic Review,* the *Southern Economic Journal,* the *California Management Review,* the *Journal of Political Economy,* and other periodicals. One of his major fields of study has been the role of women in the labor force.

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Unemployment: US vs. Other Industrial Countries

Measured by officially reported statistics, and adjusted to US concepts, the data indicate that unemployment has been very much higher in the US than in other countries since the end of World War II. For example, over the years 1959–75, unemployment averaged under 2 percent in Sweden, Australia, Japan, and West Germany. It averaged 2.4 percent in France, 3.1 percent in the United Kingdom, and about 4 percent in Italy. But in the US, the overall rate averaged 5.2 percent, exceeded only by Canada's 5.4 percent. Thus the relatively inferior performance of the US (and Canada) appears confirmed by the official statistics.

However, a careful examination of the statistical details reveals that the use of *overall* unemployment rates for comparative purposes is misleading. In the primary working years, 25 to 54 years of age, the unemployment rate over the years 1968–74 averaged 3.2 percent in the US. By any standard this is a very satisfactory and acceptable rate. The rates for this same age group in eight other industrial countries ranged from a low of 1.0 percent in Japan to a high of 3.9 percent in Canada.

Similarly a comparison of unemployment among senior workers, 55 years of age and over, reveals the US compares favorably with the other countries. The rate for this age group was 2.6 percent for the US, considerably lower than the 7.3 percent in Australia, 4.3 percent in Canada, 3.6 percent in Great Britain, and very little above the rates of 2.4 percent for France and 1.9 percent for Sweden.

It is evident that the reason for the elevated overall US unemployment rate, relative to other countries, is primarily the high unemployment among US teenagers and young adults. US teenage unemployment averaged 15 percent during the 1968–74 period. This contrasts with 5.0 percent in Australia, 7.3 percent in France, 2.5 percent in West Germany, 2.3 percent in Japan, and 5.6 percent in Sweden. The same wide differentials are reported for young adults 20 to 24 years of age. The average rate for the US for this age group was 7.7 percent in contrast to 2.2 percent in Australia, 3.7 percent in France, 1.0 percent in West Germany, 2.0 percent in Japan, and 2.9 percent in Sweden.

International Differentials Explained

There are two possible explanations for the high unemployment among young workers in the US, compared with experience in other nations. One potential explanation relates to differences in concepts and methods of measurement; the other involves differences in institutional settings.

Differences in concepts and measurements can, in general, be ruled out. It is fair to conclude that the US Bureau of Labor Statistics has done a competent professional job in adjusting the data of other countries to US methodology and concepts. Whatever methodological differences remain may be considered minor. The explanation for the differences in the incidence of unemployment must therefore be sought in the institutional settings and labor market dynamics.

There are at least seven major factors which account for the relatively high US unemployment rates compared with rates in other industrial countries.

First is the sharp difference in the length of transition from school to job. In the US the transition is long. In all other countries it comes early in life and is very short. In fact, school to job may be coterminous.

In 1970, nearly 40 percent of US youth were still in school. The percentages for other countries were Japan, 14 percent; United Kingdom, 9; Italy, 5; Sweden, 20; France, 15; Canada, 24; West Germany, 8. During the long US transition, youths make frequent moves in and out of the labor force. When they seek jobs, they usually seek part-time jobs that will fit into school schedules. This makes for relatively high unemployment rates. In other countries youth leave school much earlier, around 15 or 16 years of age. They move into the labor force, full time and for life. This makes for very low unemployment rates.

Although the US transition pattern results in elevated unemployment rates compared with other countries, it reflects positive conditions as well. It reflects greater educational opportunities, greater opportunities for job tryout, and greater opportunities to mature and to make better final career choices. To this extent, high US youth unemployment rates are favorable, not unfavorable; constructive over time, not wasteful. They represent a high degree of freedom of choice, not tightly restricted choice.

Second, there are sharp differences between the US and other countries in the attitude of youth, parents, and employers toward youth employment. In other countries, the early departure from school for full-time, full-life employment involves strong loyalty to the original employer. In turn, the employer agrees to train youth with the expectation of a lifetime of employment, regardless of whether a youth's employment is currently needed. This early employer-youth apprenticeship arrangement is backed up, not only by strong social custom, but often by youth-parent-employer contracts, legally enforceable in the courts. The result: much disguised unemployment, but very low reported turnover rates and unemployment.

No such social arrangements exist in the US. Youths take jobs and readily leave them. Employers expect high turnover rates among teenagers. The result: relatively high youth unemployment in this country. Once again, however, it must be noted that even though there is considerable lost time and wastage in the US process, there is also much that is positive.

Third, these two differences are reinforced by sharp differences in the entry wages of youth in the US compared with other countries. In all the other eight industrial countries, youths enter industry at wages far below prevailing adult rates. Foreign employers are willing to hire youths because it costs them so little. No such "youth rates" exist in the US. Here, employers must pay the federal minimum of \$2.30 an hour, which, when fringe benefits are added, comes to over \$3.00 an hour. Indeed, when high turnover rates are added, the cost to the employer probably reaches \$3.25 to \$3.50 an hour. The result: the high entry wage rates for youth in the US discourages the employment of teenagers. Or, to put the matter differently, much youth unemployment in this country is created by a federal wage minimum, which the AFL-CIO now wishes to push up to \$3.00 an hour.

Fourth, there are very important differences in layoff policy in the US as contrasted to other countries. Foreign employers are under social and governmental pressure to retain workers even in slack times when they are not needed. Such practices further disguise unemployment abroad, eliminating it from the official unemployment statistics. US employers are under no such pressure. When workers are not needed they are laid off and counted among the unemployed. In the great auto slump in Detroit in 1975–76, thousands of senior workers exercised their seniority to be laid off and let the junior workers continue on the job. Why? Because they could obtain about 90 percent of regular income for not working. The State of Michigan reported sending thousands of unemployment compensation checks to Florida every month during the massive slump in automobile production.

Fifth, teenagers are a larger proportion of the population in the US than in other countries. Since youths have higher unemployment rates in this country than do adults, this fact tends to elevate our overall unemployment rate. In 1970, 29 percent of the US population was under 15 years of age. The percentages for the other industrial countries (Canada excepted) ranged from 25 percent in France down to 21 in Sweden.

Sixth, there are differences in labor force growth rates. Other things equal, it is evident that a country with a rapidly growing labor force will have higher rates of unemployment than countries with very slow rates of growth or declining labor forces. During the years 1959–74 the annual US labor force growth rate was relatively rapid, a little over 2 percent, exceeded only by Canada and Australia. The growth rate was 1.0 percent in France, 0.5 percent in Great Britain, 1.3 percent in Japan, and 0.8 percent in Sweden. The labor force actually declined 0.3 percent annually in West Germany and 0.4 percent in Italy.

One of the major factors holding down unemployment in the US, despite the rapid growth in the labor force, has been the outstanding performance of the US economy in creating new jobs. In the difficult years 1970–74, employment grew faster in the US than in any

of nine other industrial countries, Canada excepted. Using 1970 as 100, the employment index for the US in 1974 was 109 in contrast to 101 for Japan, 103 for Sweden, 102 for the United Kingdom, and a decline to 98 for West Germany.

Seventh are differences in government policies, which tend to expose unemployment in the US and to hide it in many other industrial countries. Total job security is woven into the employer-employee relationship in most other industrial countries. A Swedish employer who wants to cut back on his work force must justify his decision before a labor market board, two months in advance. In France an employer who wishes to cut back his work force must, by law, consult with a workers' council in advance. He can count on vigorous opposition. In Italy, an employer is discouraged by law from dismissing a worker, or even remaining neutral if the worker voluntarily quits, by a requirement that he must pay a worker a stiff "seniority indemnity." In Belgium, the government has mandated the creation of jobs by large employers specifically for workers under 30, regardless of the employers' labor needs. Part of the job creation is tied to provisions for early retirement of older workers. In Sweden, in the 1973 cyclical downturn 98,000 workers were officially counted as unemployed; 80,000 workers were enrolled in training programs or employed on public work projects. The 80,000 were considered employed, not unemployed. Thus 45 percent of the Swedish unemployment was hidden. In West Germany, foreign workers have made up 10 percent of the civilian labor force in recent years. In slack times they do not become Germany's unemployed. They are sent home. All these, and many other forms of government actions abroad, make for low unemployment rates, compared with the US.

To summarize this section briefly, it appears that international comparisons, which report US unemployment rates to be much higher than in most other industrial countries, are inappropriate. The labor market conditions are so different from country to country that comparisons are misleading. If one could place US market conditions into the other countries, it is a reasonable guess that unemployment rates would be higher abroad than in the US.

Special Problem of US Youth Unemployment

In 1975 the annual unemployment rate for adults 35 years of age and over was around 5 percent. The rate for teenagers 16 to 17 years of age was reported as 22 percent. Among black teenagers in this age class the rate was around 40 percent. Clearly, these high youth unemployment rates elevate the overall national unemployment rate. Although teenagers are only about 10 percent of the labor force, they account for about 25 percent of the unemployed.

It is important to keep two facts in mind. First, most US unemployed youths are *not job losers*. For example, of 1.6 million teenagers reported as unemployed in October 1976, 10 percent were voluntary job leavers, 30 percent were reentrants, 40 percent were new entrants, and only 20 percent had lost their jobs.

Second, abundant research evidence supports the conclusion that despite the barrier which may be imposed by mandated minimum wages, youth who complete schooling and who seek full-time jobs are successful in finding work. Moreover, they find reasonably good jobs, not dead-end jobs. They find jobs with relatively high entry pay and in job families with a clear-cut line of upward progression.

Despite this, voluntary turnover rates among youth workers remain high. The widespread reports of discrimination, "floundering around," and the inability of youth to find jobs "because of the decline in low skill jobs usually filled by youth" are all, as one able scholar has put it, "part of the folk lore about youth unemployment." Or as another scholar puts it, the high unemployment rate of teenagers is "not due to inability to find jobs — it is due to their inability to stay on the jobs."

If these explanations are approximately correct, then current proposals to spend billions to provide youth jobs in public services, or more training programs, may well turn out to be ineffective in reducing youth unemployment. In fact they could prove wasteful and counterproductive if youths take the easy "welfare" jobs and postpone serious job search and training. This conclusion is supported by observation of 15 years' experience with massive federal expenditures on youth programs — with minimal results. In fact, as federal expenditures have risen, so has teenaged unemployment.

Unemployment Statistics and the 1975–76 Recovery

The 1975–76 cyclical recovery was, in some respects, the most unusual in our history and deserves special comment in any interpretation of recent unemployment trends.

Employment began to decline after October 1974 when it was 86.5 million and declined for six months to 83.8 million in March 1975, for a loss of 2.7 million jobs. Then employment began a slow but steady rise, recovering all the previous loss in jobs by February of 1976. Recovery and expansion continued impressively in 1976, reaching nearly 88 million employed in August. Thus, from the low point of the downturn there was an unprecedented gain of 4.2 million jobs. This meant that the economy had recovered all the jobs lost in the downturn and had created 1.5 million new jobs.

However, rather suddenly the unemployment rate, which had declined steadily from 8.3 percent in December 1975 to 7.3 percent in May 1976, suddenly reversed itself and began to rise. In the next five months it rose to 7.9 percent (October 1976).

With the employment recovery looking good, the only reason for a sudden climb in unemployment was a sudden change in the behavior of the labor force. In the years 1965–70 the US labor force grew approximately 1.5 million annually. During the years 1970–75 the annual growth in numbers was about 1.9 million. In 1976 one would not have expected any growth at all, or at least very little, because a slowdown in growth had characterized every single cyclical downturn since the end of World War II.

For reasons still not entirely understood, instead of leveling off or declining, the US labor force exploded in the first six months of 1976. It went from 93.5 million in February to 96.6 million in June 1976, an unprecedented jump of 3.2 million in five months — an annual growth rate of more than 6 million a year, three times anything ever observed before. Although employment continued to rise impressively in 1976, it did not grow fast enough to absorb the sudden influx of women and teenagers into the labor force. As a result, unemployment rose from May to October 1976.

After its remarkable expansion in mid-1976, the labor force declined from 95.9 million in November 1976 to 95.5 million in January 1977. During this period the unemployment rate fell from 8.1 percent to 7.3 percent.

Factors Tending to Raise Unemployment Rates

An increasing proportion of US unemployment is voluntary as a result of the steady rise in the holdout power of workers. This holdout power arises from a number of factors. (1) Unemployment compensation benefits have been liberalized to the point that some workers can get 75 to 100 percent of normal wages for not working. This has tended to lengthen the job search and encourage some employers to lay off workers. (2) The liberalization of welfare benefits (AFDC) has reached a point in some big cities such that welfare income is substantially higher and much more certain than income from working. (3) The rapid rise in families with two or more earners has increased holdout power. In 1950, just over one-third of the nation's families included two or more workers; by 1975 nearly half our families included multiple wage earners. Among husband-wife families, 55 percent were in the multi-earner category in 1975.

The implications are considerable. For example, of the 7.2 million unemployed in the first quarter of 1976, 6.9 million or 95.8 percent were family members. More than two-thirds of the 6.9 million had at least one other relative in the family who was employed. This obviously cushions the blow of unemployment. Or to put it differently, most recent US jobless persons have working relatives.

Table 1. Unemployment Among Relatives in Husband-Wife and Female-Headed Families, Third Quarter 1977

Age of relatives	Total unemployed	Percent in families with at least one member employed
Husband-wife families		
16 to 19	1,134	93.0
16 to 21	1,461	92.7
20 to 24	595	89.2
Female-headed families		
16 to 19	393	66.4
16 to 21	536	67.7
20 to 24	249	69.9

Source: Special tabulation provided by the US Department of Labor, Bureau of Labor Statistics.

The voluntary aspect of much youth unemployment may be examined by looking at unemployment among youth 16–24 years of age (Table 1). Among unemployed youth 16–19 years of age living at home, 93 percent were in husband-wife families with at least one member employed. As might be expected, jobless youth living in families headed by females were the worst off. Even so, of jobless youth (or other relatives) in these female-headed families, 66 percent were in families with at least one member employed. Since the family had income coming in, these youth were provided considerable opportunity to prolong the job search.

In the distant past, unemployment usually reflected immediate hardship for families. Unemployment statistics were, in that sense, "hard." Increasingly unemployment statistics are becoming less meaningful as a reflection of hardship. This may be demonstrated by the fact that unemployment is disappearing as a cause of poverty. Whereas 34 percent of all families with the head unemployed were in poverty in 1959, just 16 percent of such families were in poverty in 1974. If these trends continue, by 1985 the national unemployment rate will reflect virtually no poverty.

A second factor tending to elevate unemployment is the changing composition of the labor force. By sex and age group, the lowest unemployment rates are found among males 25 years of age and older. This group declined from 59.8 percent of the labor force in 1955 to 46.9 percent in 1975. Females 25 years of age and older have unemployment rates from 20 to 50 percent higher than men in this age class. Women 25 years of age and over have increased as a percentage of the labor force, from 25 percent in 1955 to 29 percent in 1975.

The highest unemployment rates are those of teenagers of both sexes. Their rates run two to three times higher than for the older adult workers. Teenagers in the labor force have risen from 6.3 percent in 1955 to 9.5 percent in 1975. One of the reasons for high unemployment among women and teenagers is that they have high rates of part-time employment. In turn, part-time workers have higher rates of unemployment. In 1974, 13 percent of men worked part-time, but 32 percent of women worked part-time. The average unemployment rates 1963–74 for full-time workers was 4.4 percent. For part-time workers it was 7.4 percent. About 70 percent of teenagers who worked in 1974 worked part-time. The percentage of the labor force working part-time has been rising and may be expected to continue to rise in the future.

Another factor tending to raise unemployment rates is the largely unreported number of immigrant workers holding jobs. Many of these jobs would otherwise be held by American citizens. The actual annual increase in the size of the illegal immigrant force is uncertain, but the official estimates shown in Table 2 give some idea of the magnitude of the problem.

The total accumulated illegal alien labor force in the past five years is estimated from 3 to 5 million. It is believed that eight out of ten are employed but do not answer to official household enumeration surveys. Thus, as a rough guess there are 3 million illegal job holders.

By comparison, in January 1976, 7.0 million persons were officially counted as unemployed in this country. This suggests that the real US unemployment rate, if the illegal alien workers were removed, might well be down to around 4 million workers, or 4 percent. Since there are no immediate prospects for stopping, or even slowing, the inundation of illegal aliens into this country, primarily from Mexico, one can only conclude this illegal labor force will continue to raise US unemployment rates, perhaps by as much as 20 to 40 percent annually.

A fourth factor tending to raise reported unemployment has been the decline in the proportion of the employed who are self-employed or unpaid family members. As a percentage of all employed they have declined from 21.5 in 1948 to 9.7 in 1975. Both groups typically report very low unemployment presumably because their earnings are residual and not contractual. For example, in 1975 the unemployment rate for these two groups was about 1.0 percent and the rate for all experienced workers 8.5 percent.

A fifth factor contributing to higher unemployment rates is the high and rising cost of hiring new workers because of increased fringe benefits. These include employer contributions to social security, private pension plans, insurance, paid vacations, paid rest and lunch periods, paid holidays, workmen's compensation, paid sick leave, profit sharing, unemployment compensation, and other benefits. In 1975 average pay for time worked in industry was $9,709. The cost of fringe benefits was $3,984, for a total of $13,693, with the fringe benefits accounting for 30 percent of the total. In many industries the fringes account for over 35 percent of employee costs. As a consequence, private concerns are finding it more economical to work existing labor forces overtime than to hire new workers, thus adding to unemployment levels.

A sixth factor tending to elevate US unemployment rates is the rising divorce and separation rates. This country has the highest divorce rate in the world. It reached 4.8 per 1,000 population in 1975, double the rate of a decade ago. That rate contrasts with rates of 3.1 for Sweden, 2.4 in the United Kingdom, about 1 in West Germany, Australia, Japan, and France, and 0.3 in Italy.

In March 1975, 12.3 percent of the US female labor force was either divorced or separated, up from 10.7 percent in 1970. This rise elevates overall unemployment

Table 2. Estimated Number of Aliens Entering the United States, 1976

Classification	Number (thousands)
Illegal immigrants	
Visitor overstays	300
Student overstays	93
Alien migrant workers	500
Total, illegal aliens	893
Legal immigrants	200
Total, illegal and legal immigrants	1,093

rates because divorced or separated women have higher unemployment rates. Married women with husband present experience unemployment rates of 8.7 percent. In contrast, divorced and separated women experience unemployment rates of 14.8 percent and 18.3 percent, respectively.

A seventh institutional factor contributing to high and rising US unemployment rates concerns the sexual activity of US teenaged women. Among 22 countries the US ranked fourth in teenager fertility rates. Among the 600,000 teenaged women who gave birth in 1974, at least 60 percent of births were unwanted. One-third of these births were out of wedlock; this rate has been rising.

Studies report that teenaged mothers have much higher unemployment rates than women who first give birth after the age of 20. This process perpetuates itself. There is evidence that when children of teenaged mothers reach their teens, they are much more likely to have high rates of unemployment, delinquency, and dependency on welfare than children of women who postpone childbearing until after the age of 20. To the extent that liberalized welfare policies encourage low-income teenagers to carry pregnancies to term, the federal government has been a factor in contributing to this source of unemployment.

An eighth and final factor tending to elevate unemployment rates in this country is the very heavy cost of government overregulation. It is impossible to make precise estimates of these costs. The steel industry reports it will be spending over $1 billion a year for many years for pollution controls alone. EPA estimates it will cost industry over the next seven years about $60 billion for operating and maintenance costs just to meet 1983 water standards. It is estimated it will cost at least $15 billion in capital costs to meet OSHA's noise standards. Other estimates indicate industry will have to spend up to $112 billion in 1972–81 to meet all types of pollution standards.

Won't the expenditure of all these billions create jobs and to that extent lessen unemployment? Irving Kristol has been quick to point out that one must distinguish between "capital spending" and "capital investing," or distinguish between creating jobs by building pyramids or building new, more efficient production facilities. Last year, capital investment was reported as $121 billion. But Professor Kristol calls attention to the fact that at least 10 percent of this, perhaps more, consisted of economically unproductive expenditures to meet government regulations, which leaves us with a net reduction from 1975 in true capital investment. This could continue for many years. It could prove to be a tremendous drag on the productive job creating ability of the free enterprise system and serve to keep unemployment artificially high. Because of delays in getting approval, because of arbitrary and capricious rejection of construction proposals by federal courts and agencies, needed projects running to billions of dollars are now drawing dust in business files. Here again, the costs in unemployment are likely to be high. Such unemployment is government created.

Conclusions and Comments

In comparing US unemployment with that of other

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industrial countries, the statistics mean very little without careful interpretation. I suggest that US unemployment is probably no higher than unemployment abroad and, if one could equate labor market conditions, might well be lower.

Relatively high US youth unemployment rates are one of the most misinterpreted of all labor market data. The description of US youth unemployment as "grim," "disgraceful," and "horrendous" by many labor economists, some in high places, is open to serious question. Much US youth unemployment serves a useful purpose and reflects the advantages of a free labor market. The youth market needs greater efficiency and information but is no "time bomb waiting to explode."

The recovery of employment accompanied by an even greater rise in the labor force in 1975 and 1976 brought confusion about, and mistrust of, employment and unemployment statistics. The latter are quite sound. It was the unusual behavior of the labor force that remains unexplained.

Because of certain underlying institutional changes, some created by federal policies, unemployment is not likely to return very soon to the levels of the mid-1960s.

Federal manpower policy is currently in a state of confusion. It is working at cross-purposes. The Department of Labor promotes unemployment compensation policy that creates unemployment. The Department of Health, Education, and Welfare promises welfare payments so liberal as to create unemployment. The EPA, OSHA, and others issue regulations, or hold up construction projects, and create unemployment. Then the White House announces that Congress must rush through new public service jobs to reduce unemployment: we must create a new youth employment program because youth cannot find jobs when the federal government's own research reports show youth can and do find jobs. It is job-leaving that creates high youth unemployment. Just how a new youth corps will deal with the problem remains unexplained.

The present administration is supporting a new investigation of employment and unemployment statistics, the first since the report in 1962. The new committee will undoubtedly do an excellent technical job of telling us once again how good the federal government is at gathering and publishing statistics on employment and unemployment — and just what these statistics really mean. Unfortunately what we will not get from the committee will be a realistic appraisal of how the welfare state philosophy of the past 10 years has gotten the nation into a situation in which the federal government itself has been a major factor in creating the very unemployment it so deplores. Until realism returns to Washington it is only possible to observe the turn of events and hope the spectacle does not cost all of us too much.

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Economy Rebounds

Economic activity has quickened even though summary statistics for the first quarter show a decline. Real output drifted lower for the first quarter as a whole, reflecting weakness in the first two months of the year. However, indicators since then have registered strong increases. Industrial production, home-building, employment, income, and consumer spending have moved higher.

Growth of monetary aggregates has slowed during the past several months, and interest rates have generally stabilized. The Federal Reserve asserts that they have edged toward a more restrictive monetary policy, but their posture is far from clear.

Real GNP Declines . . . But Other Indicators Improve

Output of the economy declined, on average, during the first three months of the year. Real gross national product — that is, spending on currently produced goods and services measured in 1972 prices — edged downward at a 0.6 percent annual rate. The recent decline was the first in three years. Administration economists attribute the decline to the coal strike and the abnormal winter.

Output has risen sharply since January. Industrial production — which includes output of mines, factories, and utilities — has rebounded impressively (see chart). Since the precipitous one-month decline in January, industrial output has expanded at an 11.3 percent annual rate. The March production rate was 4.2 percent above its year-earlier pace, but first-quarter production was virtually unchanged from the fourth quarter.

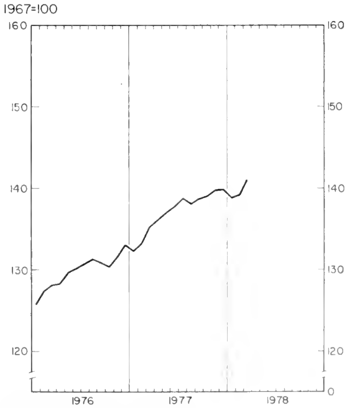
Home-building has almost recovered from its weather-induced plunge. March housing starts jumped by more than 30 percent from their depressed January-February pace. Even so, at an annual rate of 2.1 million units, the March rate was below the average of the last half of 1977.

Employment and Income Expand

Reflecting the recovery in economic activity, employment and income have moved higher. Employment, which edged upward at a 2.6 percent annual rate from December to February, has since risen at a 3.9 percent rate.

Even though labor markets have improved, the rise in employment has been insufficient to provide jobs as rapidly as people have entered the work force. The un-

Industrial Production



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employment rate moved to 6.2 percent of the labor force in mid-March, chiefly reflecting an increase in the unemployment rate for adult women.

Income growth has surged since February. From December to February, personal income expanded a total of only $10.1 billion. However, the increase of $19.4 billion in March was nearly double the increase of the two preceding months. The income gain centered in private wages and salaries — reflecting the rise in employment and hours worked.

Spending Picks Up

Households have expanded their purchases in response to improvements in employment opportunities and increases in personal incomes. Retail sales have bounded upward since January, increasing at nearly a 20 percent annual rate. Notwithstanding these gains, first-quarter retail sales averaged lower than in last year's final quarter. Householder purchases of nondurable goods led the February-to-March increases. Lagging automobile sales in March continued to depress the spending increases. In early April, automobile sales rose 27 percent.

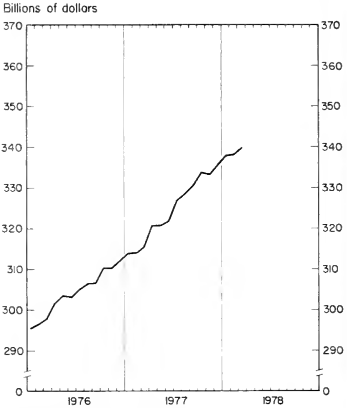
It is important to recognize that retail sales figures include increases due to inflation. Retail sales in March were 8.4 percent above their year-ago pace. Prices have risen about 6.5 percent over the past year; hence, the physical volume of retail spending has advanced only about 2 percent.

Inflation Rates Remain Rapid

The rate of inflation has stayed at a very high level. Consumer prices rose at a 9.6 percent annual rate in March, matching or exceeding the rates in the first two months of the year. Wholesale prices of finished goods rose at a 7.2 percent annual rate in March, down from February's 13.2 percent rate of increase. Prices of intermediate goods jumped upward at a 9.6 percent annual rate. Prices of crude goods rose at nearly a 20 percent rate in March. This pattern suggests that price-increase impulses are continuing to be transmitted through the price structure.

Economists often refer to the "underlying" rate of inflation. Such a term purports to abstract from the month-to-month, irregular or random shifts in prices, and to concentrate on the stable, persistent, long-term or secular movement in prices. A recent government report asserts that the underlying rate of inflation "seems hopelessly stuck in the 6 percent to 7 percent range."

Money Supply



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Monetary Policy at Crossroads

Growth in monetary aggregates has slowed since January (see chart). The money supply (M1) has risen at roughly a 4 percent annual rate since January, only about half the rate of growth over the past year. The money supply defined to include consumer-type time deposits (M2) has also grown more slowly in 1978. Some analysts regard such a development as an indication that monetary policy has tightened.

Although it may be true that monetary *actions* have turned restrictive, it is unlikely that *policy* has changed. Instead, it is probable that the recent slowdown in growth rates of monetary aggregates is a product of Federal Reserve attention to day-to-day forces affecting short-term interest rates. Interest rate stability was probably a result of the no-growth economy; supply and demand factors were approximately in balance. The Federal Reserve had no occasion to become a major market participant. Its moderating influence was not needed.

However, if I am correct in believing that the economy is characterized by a renewed vigor, we can anticipate both higher interest rates and a quickened money supply growth. Interest rate increases will reflect a strengthening in credit demand. Money supply increases will result from Federal Reserve efforts to limit the day-to-day swings in interest rates. WILLIAM R. BRYAN

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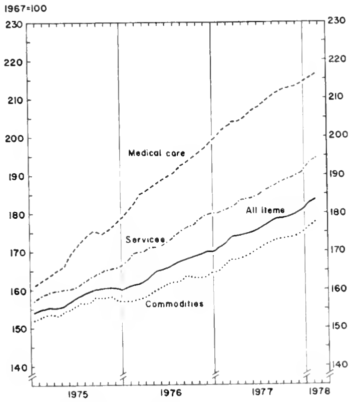
Local Illinois Developments

Chicago Prices and the New CPI

Chicago continues to experience rapid inflation. The consumer price index for the Chicago standard consolidated area registered a 7.6 percent advance from February 1977 to February 1978, somewhat greater than the 6.4 percent rise in 1976 (see chart). Increases for the nation during those years were 6.4 percent and 6.5 percent, respectively. Rates of increase in prices at the retail level have turned upward again in recent months. The rate of inflation in Chicago has picked up substantially in the past two months, with an annual rate of increase of 16.8 percent in January and 10.8 percent in February.

Since the beginning of 1977 food prices have risen far more rapidly than the overall index. Moreover, they have advanced at a faster pace in Chicago than in the nation. Food costs rose 10.5 percent during 1977 in the Chicago area; thus far in 1978 they have risen at more than a 23 percent annual rate. These increases may be compared with increases for the nation of 8.2 percent for 1977 and at nearly a 17 percent rate for the past two months.

Chicago Consumer Price Index



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Illinois Business Indexes

Item	Feb. 1978 (1967 = 100)	Percentage change from Jan. 1978	Percentage change from Feb. 1977
Employment — manufacturing[1]	n.a.		
Weekly earnings — manufacturing[1]	211.6	+ 1.0	+ 11.2
Consumer prices in Chicago[2]	184.2	+ 0.9	+ 7.6
Life insurance sales (ordinary)[3]	240.2	+ 11.8	+ 10.3
Retail sales[4]	181.4[a]	− 0.3	+ 4.5
Farm prices[5]	202.0	+ 3.0	+ 1.5
Building permits — residential[4]	42.7	+ 22.1	− 4.8
Coal production[6]	0.0	−100.0	−100.0
Petroleum production[7]	35.9	+ 3.2	− 7.0

[1] Ill. Dept. of Labor; [2] US Bureau of Labor Statistics, [3] Life Ins. Agcy. Manag. Assn., [4] US Dept. of Commerce, [5] Ill. Crop Rpts., [6] Ill. Dept. of Mines, [7] Ill. Geol. Survey
[a] Preliminary. n.a. Not available

Other categories posting above-average price rises were housing and medical care; but apparel commodities and transportation were up less than the overall rate. Housing in Chicago was 9.0 percent higher than a year earlier (7.5 percent nationally) and medical care was 8.4 percent higher (8.8 percent nationally). Apparel prices in Chicago were up only 1.2 percent (2.5 percent nationally) and transportation costs increased 2.9 percent (3.6 percent nationally).

Since the last major revision of the CPI in 1964, there have been substantial changes in what Americans buy and in the way they live. The index has been updated to reflect these changes. The increasing proportion of two-worker families, for instance, has both raised the income levels of many families and changed the way those incomes are spent. To take account of these changes, this fifth major revision of the content and coverage of the index — the most complex and comprehensive ever undertaken — has been underway for the past eight years. The revision, including the Consumer Expenditure and Point-of-Purchase Surveys, cost about $50 million.

With the completion of the revision in January 1978, the US Bureau of Labor Statistics is publishing two consumer price indexes. One is a revised index reflecting the buying habits of urban wage earners and clerical workers. It represents the items purchased and the prices paid by about half of the urban population. The second is a new and more comprehensive index reflecting the buying habits of all urban households, including professional workers, the self-employed, the poor, the unemployed, and retired persons. Not included in the index are persons living outside urban areas, farm families, persons in the military services, and those in institutions.

Declining Milk Production in Illinois

About $5 of every $100 spent in US supermarkets is on dairy products. In fact, the "typical" consumer spends more for packaged fluid milk than for any other product except fresh meat. In 1976 per capita consumption of dairy products totaled 244 pounds of fluid milk, 17.8 pounds of ice cream, 15.9 pounds of cheese, 4.9 pounds of condensed and evaporated milk, 4.4 pounds of butter, and 3.8 pounds of nonfat dry milk. In 1976 these dairy products accounted for about 11.2 percent of the total food energy received from all sources.

The fluid milk industry includes those establishments primarily engaged in processing (pasteurizing, homogenizing, bottling) and distributing fluid milk and cream and related products, including cottage cheese, buttermilk, whipped cream, and yogurt. In 1973 there were 2,300 firms producing fluid milk in the US and total employment for the industry was 125,000. The estimated value of shipments in 1976 was about $13.1 billion.

At the turn of the century, the fluid milk industry was characterized by small-scale production and very personal marketing. The high perishability of the product coupled with a limited transportation system, a lack of refrigeration equipment, and restrictive ordinances in many towns requiring milk to be processed in the town in which it was sold contributed to the local nature of the industry. Over the years, however, the increasing use of pasteurization and other safety measures broadened the market and contributed to the growth of the industry.

Declining Per Capita Consumption

The general character of the milk industry over the past 25 years has been one of adjustment to shifting demands for milk. Up to the 1950s both total and per capita consumption of processed fluid milk advanced rapidly. Population growth, higher incomes, and improving milk distribution methods (especially truck refrigeration) explain the sustained growth of this period. In the late 1950s, however, two major forces slowed the growth of milk production. First, other beverages, such as frozen juice concentrates, vending machine soft drinks, powdered milks, and a whole host of prepared foods in which milk had been replaced as an ingredient, were marketed and purchased in great volume. Second, the US birth rate, which had been high during and immediately following World War II, began to drop. This caused a particularly large decline in the proportion of young children — a change unfavorable to milk suppliers. In 1960 per capita milk consumption was about 325 pounds. In 1976 this number had dropped to 244 pounds — about a 26 percent decline.

Total US milk production declined only slightly from 123 billion pounds in 1960 to about 120 billion pounds in 1976. Of the current total of milk supplied by domestic milk cows, about 42 percent is utilized for fluid milk and 54 percent for manufactured products (cheese, ice cream, canned milk) and the remainder is used on farms — fed to calves or consumed on the farm.

The most striking change in the utilization of milk has been the growing use for cheese and a declining use in the production of butter. In 1962 about 27 percent of all milk was utilized in the production of butter; in 1976 this percentage had dropped to 18. In that same period the percentage used for cheese grew from 8.5 to 17. The percentage utilized in the production of fluid milk has stayed close to 42 percent.

Illinois Production Falling

Producing milk has become a less important enterprise on Illinois farms over the past 50 years. In 1930, 15 to 18 percent of total Illinois farm income was derived from the sale of dairy products. In 1976 cash receipts from their sale totaled over $230 million — approximately 4 percent of Illinois farm income. Many farmers have quit the business in favor of easier ways to make a living and others have turned to producing corn and soybeans. In 1976 these two crops accounted for 38 percent and 25 percent, respectively, of total state farm income.

Total milk production in the State reached its peak in 1945 — about 5.8 billion pounds. In more recent years production has declined by about 2 percent a year. Output in 1976 was estimated at 2.5 billion pounds — about 2.2 percent of total US production.

The total number of dairy cows in Illinois has been steadily falling while the average production per cow has been increasing dramatically. In 1976 there were approximately 241,000 milk cows on farms in the State. This total compares with 925,000 cows in 1950. Production per cow per year over the period increased from 5,630 pounds to 10,400 pounds.

Most Illinois dairy farms are in the northern part of the State, especially in the several contiguous counties along the Wisconsin border. The most concentrated area of milk production is Stephenson County, near the northwest corner of the State. Stephenson County led the State in number of milk cows in 1977 with 30,800 and produced 320 million pounds of milk. Jo Daviess County was second with 19,800 and 206 million pounds of milk. About 37 percent of the state's total production originates from a 12-county area located in the northwest portion. About 16 percent is produced in an 11-county area in the northeast portion. Production in the rest of the State is more or less uniformly distributed.

The number of firms engaged in fluid milk processing in Illinois has steadily declined. In 1964 there were 169 establishments; in 1975 the number had dropped to 64. Employment over that same period dropped from 7,700 to 4,200 workers.

Besides the fluid milk producers in Illinois, there are 4 firms that manufacture creamery butter, 33 firms which produce cheese, 22 involved in the production of condensed and evaporated milk, and 34 companies producing ice cream and frozen desserts. Another 5,000 individuals are employed in the making of these products.

MICHAEL TREBING

Comparative Economic Data for Selected Illinois Cities, February 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		n.a	3,728.0[a]	$42,650[a]	n.a.	n.a
Percentage change from	Jan. 1978		+4.8	+3.9		
	Feb. 1977		+4.8	−2.1		
NORTHERN ILLINOIS						
Chicago		n.a.	1,856.2	$32,481	n.a.	n.a.
Percentage change from	Jan. 1978		+1.3	+4.9		
	Feb. 1977		+2.2	−3.2		
Aurora		$ 1,119	145.9	$ 481	n.a.	n.a
Percentage change from	Jan. 1978	+118.9	+0.6	+2.1		
	Feb. 1977	+24.4	−3.9	+0.6		
Elgin		$ 1,392	96.2	$ 619	n.a.	n.a.
Percentage change from	Jan. 1978	+68.7	+1.0	+22.0		
	Feb. 1977	+29.0	+7.7	+28.6		
Joliet		$ 816	410.3	$ 313	n.a.	n.a.
Percentage change from	Jan. 1978	+80.9	−12.9	+1.2		
	Feb. 1977	−89.2	+14.3	−7.9		
Kankakee		$ 746	83.9[b]	$ 300	n.a.	n.a.
Percentage change from	Jan. 1978	+669.0	+8.3	+62.1		
	Feb. 1977	+1,422.4	+6.3	+66.6		
Rock Island-Moline		$ 498	120.1[c]	$ 1,213	n.a.	n.a.
Percentage change from	Jan. 1978	−58.9	−0.2	−0.5		
	Feb. 1977	−39.1	+4.4	−6.8		
Rockford		$ 1,270	177.6	$ 869	n.a.	n.a.
Percentage change from	Jan. 1978	−26.3	+6.2	+3.4		
	Feb. 1977	−31.7	+3.4	+4.8		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 1,076	37.2	$ 835	n.a.	n.a.
Percentage change from	Jan. 1978	+54.8	−22.6	−6.2		
	Feb. 1977	−20.9	−21.5	+7.1		
Champaign-Urbana		$ 1,245	50.3	$ 705	n.a.	n.a.
Percentage change from	Jan. 1978	−44.4	+2.4	+1.4		
	Feb. 1977	+67.1	−2.3	−2.8		
Danville		$ 953	48.2	$ 222	n.a.	n.a
Percentage change from	Jan. 1978	+187.0	+2.5	−24.4		
	Feb. 1977	+319.8	+5.0	−58.0		
Decatur		$ 722	123.6	$ 432	n.a.	n.a.
Percentage change from	Jan. 1978	−25.2	+7.0	−0.2		
	Feb. 1977	−61.4	+13.2	+0.9		
Galesburg		$ 295	34.3[b]	$ 153	n.a.	n.a
Percentage change from	Jan. 1978	+49.7	+11.3	−7.8		
	Feb. 1977	−83.2	+3.9	+0.0		
Peoria		$ 5,958	214.6	$ 1,225	n.a.	n.a.
Percentage change from	Jan. 1978	+396.5	+7.6	+4.2		
	Feb. 1977	+146.4	+13.0	−0.4		
Quincy		$ 271	45.3	$ 210	n.a	n.a
Percentage change from	Jan. 1978	−26.9	+1.7	+5.5		
	Feb. 1977	+100.7	+1.7	+6.5		
Springfield		$ 1,568	116.7	$ 1,630	n.a.	n.a.
Percentage change from	Jan. 1978	−20.6	−12.6	−3.3		
	Feb. 1977	−6.9	+14.2	+1.7		
SOUTHERN ILLINOIS						
East St. Louis		$ 67	27.3	$ 166	n.a.	n.a.
Percentage change from	Jan. 1978	+139.2	−2.8	−6.7		
	Feb. 1977	−15.1	+2.6	+9.2		
Alton		$ 261	76.2	$ 120	n.a.	n.a.
Percentage change from	Jan. 1978	−29.8	−2.6	−14.8		
	Feb. 1977	+200.0	+14.5	−0.8		
Belleville		$ 113	27.1	$ 435	n.a.	n.a.
Percentage change from	Jan. 1978	−11.7	+2.2	+10.4		
	Feb. 1977	−52.1	+12.4	+83.5		
Carbondale-Murphysboro		n.a	37.0	$ 241	n.a.	n.a
Percentage change from	Jan. 1978		−1.3	+8.5		
	Feb. 1977		+9.4	−8.7		

Sources: [1] Local sources; data include federal construction projects. [2] Local power companies. [3] Local post office reports; accounting period ending 24 February 1978. [4] Illinois Department of Labor; preliminary.
[a] Total for cities listed. [b] Includes immediately surrounding territory. [c] Includes East Moline. n.a. Not available.

Participation and Expenditures by Illinois Fishermen and Hunters

JOHN F. DWYER AND MICHAEL L. HATMAKER

A recent survey of Illinois residents indicates that they engage in a large amount of fishing and hunting activity and make substantial expenditures in conjunction with these activities. The survey, part of the national survey of fishing and hunting activities conducted by the US Fish and Wildlife Service every fifth year since 1955, concerned activities in 1975. The Illinois Department of Conservation provided supplemental funding to intensify the sampling of Illinois residents to provide for state-level estimates. The basic survey data file was recently made available to the Department of Forestry at the University of Illinois for subsequent analysis. This report presents some of the initial results of that analysis.

The survey included a telephone sample and a follow-up mail questionnaire. The telephone sample consisted of 51 different Illinois residential exchanges, selected on a 1 to 2 metropolitan/nonmetropolitan ratio. Interviews were completed with 4,447 telephone households. In the mail phase, 2,064 individual questionnaires were sent out and 701 usable returns received. Because of disproportionate sampling in both phases of the survey, the results were weighted to bring them back into balance with the Illinois population.

Participation

In 1975 some 2.5 million Illinois residents nine years of age or older (more than one-fourth of the population in that age category) engaged in hunting or fishing activities. They spent a total of 67 million days engaged in these activities (Table 1). Fishing had four times as many participants and participant-days of activity as hunting, with warm water fishing being the most popular type of fishing. Small game hunting was the most popular type of hunting.

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Expenditures

In addition to significant allocations of time, Illinois residents spent more than $1 billion on hunting and fishing. This included $856 million spent in conjunction with fishing and $155 million spent with hunting (Table 2). These expenditures included outlays for equipment, food, lodging, transportation, and related charges and fees.

Nearly three-fourths of the expenditures by hunters and fishermen went for transportation, food, and lodging. Transportation looms as a particularly important expenditure, being larger than food and lodging combined. The remaining expenditures were divided between fees and equipment.

The amount of expenditures and their distribution among the cost categories varies somewhat with the types of activities. Subsequent analysis looks at average expenditures per participant-day of activity (Tables 3 and 4). There is likely to be significant variation in expenditures depending on the individual, group, and length of trip. Fishermen tended to spend more per participant-day than hunters, with saltwater fishing having the highest average expenditure per participant-day. The high expenditure for saltwater fishing is due in large

Table 1. Participation in US Hunting and Fishing Activity by Illinois Residents, 1975

Activity	Number of participants (Thousands)	Participant-days (Thousands)
Fishing	2,418	54,354
Warm water[a]	2,322	46,510
Cold water[b]	525	4,973
Sea-run[c]	256	1,817
Saltwater[d]	225	1,054
Hunting	564	13,625
Small game[e]	522	6,741
Migratory birds[f]	239	2,788
Big game[g]	179	1,259
Other hunting[h]	149	2,837
Hunting or fishing	2,548	67,190

[a] Black bass, walleye, sauger, pike, pickerel, muskie, bluegill, crappie, catfish, perch, etc.
[b] Freshwater trout, landlocked salmon, grayling, kokanee, whitefish, char, etc.
[c] Sea-run or Great Lakes salmon, steelhead, sea-run trout, striped bass, American shad, sturgeon, herring, etc., that go from saltwater to fresh water to spawn.
[d] Bluefish, cod, croaker, drum, flounder, porgy, snapper, mackerel, tuna, weakfish, sea trout, jacks, etc.
[e] Rabbits, squirrels, pheasant, quail, partridge, etc.
[f] Ducks, geese, doves, woodcock, etc.
[g] Deer, elk, turkey, etc.
[h] Crows, woodchuck, fox, and other animals often considered pests and usually not hunted as food

Table 2. Expenditures by Illinois Residents for Hunting and Fishing in the US, 1975
(Dollars in millions; percentages in parentheses)

	Fishing		Hunting		Total	
Transportation[a]	353	(41)	50	(32)	403	(40)
Lodging	119	(14)	8	(5)	127	(12)
Equipment	102[b]	(12)	55[c]	(35)	157	(16)
Food, drink, refreshment	190	(22)	27	(17)	217	(21)
Fees	92	(11)[d]	15	(10)[e]	107	(11)
	856	(100)	155	(100)	1,011	(100)

[a] Includes public transportation and use of private automobiles. Private automobile costs are based on $0.14 per mile

[b] Purchase and repair of items such as lines, artificial lures, tackle, tackle boxes, bait holders, rods and reels, landing nets, creels, fish bags, rod and reel cases, holders, harnesses, sand spikes; boat equipment especially for fishing but *not* boats, motors, natural bait, and gear used in fishing that *could* be used for other things such as camping equipment or recreation vehicles

[c] Purchase and repair of guns, rifles, bows and arrows, telescopic sights, decoys or game calls, game carriers, ammunition, equipment cases or carriers, hand loading equipment and components, expenditures on hunting dogs, but *not* gear used in hunting that *could* be used for other things, such as camping equipment or binoculars, and equipment bought primarily for target shooting

[d] Fees for access to public and private areas, guides, package trips, equipment rental, charter boat, boat launching, natural bait, licenses, tags, stamps, and others

[e] Fees for use of and access to public and private land, guides, package trips, equipment rental, license, tags, stamps, and others

part to significant transportation and lodging costs that are incurred because saltwater fishing necessarily takes place out of state. Big-game hunters had the second highest average expenditure per day, once again due primarily to large expenditures for transportation and equipment.

Equipment expenditures tend to be higher for hunters than fishermen. Big-game hunters have the highest average expenditures for equipment. These expenditures are also high for sea-run fishing. Expenditures for food tend to be highest for those activities with high transportation and lodging costs, since daily outlays for food are likely to increase with length of trip and time away from home. Activities with high transportation, food, and lodging costs include saltwater fishing, cold water fishing, and big-game hunting. These are most often engaged in out of state (Table 5) and have the largest number of miles traveled per participant-day (Table 6).

Fees for access to public or private areas or package trips do not loom large on a per participant-day basis; but are highest for big-game hunting and migratory-bird hunting. Equipment rental expenses were higher for fishing than hunting, probably a reflection of boat rental charges and specialized equipment for saltwater and sea-run fishing. These fishing equipment rental expenses are often tied to charter boat expenditures. Natural bait was a relatively large fee item for fishermen, particularly for saltwater fishing.

Spatial Distribution of Expenditures

Expenditures by hunters and fishermen are made in a number of locations, including near their residences, along the route to and from the hunting and fishing activities, and in the vicinity of the areas where the activities take place. Illinois residents often travel considerable distances to engage in hunting and fishing activity. This tends to disperse their expenditures over wide areas. However, Illinois residents found nine-tenths of their hunting opportunities and more than two-thirds of their fishing activity in their home state (Table 5). They were most inclined to travel outside the State for saltwater fishing, cold water fishing, and big-game hunting; but they found at least a portion of the opportunity for all activities outside the State.

Expenditures in Illinois

Although specific information about the location of expenditures by Illinois hunters and fishermen was not gathered, estimates of expenditures made within the state were developed. Average expenditures were calculated for individuals who engaged only in a particular type of hunting or fishing inside Illinois (Tables 3 and 4). These expenditures were taken as representative of those for all days spent in that activity in Illinois, regardless of the amount out of state in which a participant also engaged. Consequently, these average expenditures were multiplied by the number of days of that activity reported for Illinois to derive estimates of expenditures by Illinois residents for hunting and fishing in the State (Table 7). Illinois residents spent an estimated $415 million for hunting and fishing in Illinois, including $306 million for fishing and $109 million for hunting (Table 3). This represents 36 percent of fishing expenditures and 70 percent of hunting expenditures by Illinois residents. Note that Illinois residents spent a smaller portion of their hunting and fishing expenditures in their home state than was the case with their participation. This is because they tended to spend more per day for activities outside the

Table 3. Expenditures per Participant-day in the US and Illinois by Illinois Residents, by Type of Fishing, 1975[a]

Expenditure category	Type of fishing: Warm water	Cold water	Sea-run	Saltwater
	in the United States			
Equipment	$ 1.56	$ 1.98	$ 7.87	$ 3.78
Food, drink, refreshment	3.12	5.51	4.45	8.64
Lodging	1.92	3.47	1.49	8.30
Public transportation	0.16	0.50	1.39	3.24
Personal automobile	5.40	8.06	6.40	27.97
Public area access	0.03	0.07	0.27	—[b]
Private area access	0.11	0.04	0.02	0
Guide	0.14	0.31	0.01	0
Package trip	0	0.01	0	0
Equipment rental	0.44	0.66	0.64	0.64
Charter boat	0	0	1.63	2.17
Boat launching	0.05	—[b]	0.62	0.24
Natural bait	0.50	0.54	0.50	1.07
Other	—[b]	0.02	0	0
Total	$13.44	$21.17	$25.29	$56.05
	in Illinois			
Equipment	$1.23	$ 1.52	$ 3.91	$0
Food, drink, refreshment	2.21	3.13	3.47	0
Lodging	0.75	0.71	1.21	0
Public transportation	0.17	0.07	0.05	0
Personal automobile	2.45	4.35	4.92	0
Public area access	0.01	0.07	0.16	0
Private area access	0.06	0.06	0.03	0
Guide	0	0.02	0	0
Package trip	0	0	0	0
Equipment rental	0.13	0.23	1.38	0
Charter boat	0	0	1.47	0
Boat launching	0.01	0	0	0
Natural bait	0.49	0.79	0.56	0
Other	0.01	0.01	0	0
Total	$7.52	$10.96	$17.16	$0

[a] Fees for licenses, tags, and stamps not included because they could not be disaggregated by type of fishing

[b] Less than $0.005

Table 4. Expenditures per Participant-day in the US and Illinois by Illinois Residents, by Type of Hunting, 1975[a]

Expenditure category	Small game	Migratory birds	Big game	Other
	in the United States			
Equipment	$ 4.01	$2.96	$ 8.08	$3.01
Food, drink, refreshment	2.00	2.12	4.41	0.61
Lodging	0.35	0.62	2.16	0.22
Public transportation	0.33	0.25	0.69	0.15
Personal automobile	3.56	2.64	9.04	0.84
Public land use/access	0.01	0.03	0.03	—[b]
Private land use/access	0.08	0.26	0.14	—[b]
Guide	0.02	0.12	1.03	—[b]
Pack trip	0	0.02	0.13	—[b]
Equipment rental	0.10	0.02	0.27	—[b]
Other	0.02	0.09	0.11	—[b]
Total	$10.48	$9.13	$26.09	$4.83
	in Illinois			
Equipment	$4.09	$2.85	$ 7.46	$3.63
Food, drink, refreshment	1.78	1.47	3.78	0.47
Lodging	0.14	0.40	1.07	0.05
Public transportation	0.13	0.22	0.29	0.10
Personal automobile	2.85	2.04	6.32	0.78
Public land use/access	0.02	0.04	0.01	—[b]
Private land use/access	0.09	0.30	0.02	—[b]
Guide	—[c]	0.08	0	—[b]
Pack trip	0	0.02	0	—[b]
Equipment rental	0.04	—[b]	0.19	—[b]
Other	0.02	0	0	—[b]
Total	$9.16	$7.42	$19.14	$5.03

[a] Fees for licenses, tags, and stamps not included because they could not be disaggregated by type of hunting.
[b] Not collected.
[c] Less than $0.005.

State, owing primarily to higher costs of transportation, food, and lodging.

Opportunities for Business

Firms and communities hoping to gain a larger share of the billion dollars expended by Illinois hunters and fishermen can follow two general strategies: (1) attract more hunting and fishing activity into a particular area, and (2) induce hunters and fishermen to spend more when in the area. Note that equipment, transportation, food, and lodging loom as particularly large expenditures by hunters and fishermen. Perhaps firms and communities should aim at receiving more of these expenditures.

The likelihood of attracting a large portion of these expenditures is enhanced in areas where hunters and fishermen stay overnight. This tends to increase expenditures for food, fuel, and equipment. Purchases of equipment can be enhanced by firms catering to special needs for the particular area.

Where there are opportunities to cater to several different types of fishing and hunting, it may be desirable to cater to big-game hunters or sea-run or cold water fishermen because they tend to make larger expenditures.

Table 5. Percentage of Hunting and Fishing Activity by Illinois Residents That Took Place in Illinois, 1975

Activity	Percentage
Fishing	69
Warm water	71
Cold water	53
Sea-run	80
Saltwater	0
Hunting	90
Small game	92
Migratory birds	92
Big game	70
Other hunting	91

Table 6. Miles Driven by Illinois Residents to Engage in Hunting and Fishing in the US, 1975

Activity	Miles driven (Thousands)	Miles per participant-day
Fishing	2,405,830	44
Warm water	1,813,000	39
Cold water	294,900	59
Sea-run	84,130	46
Saltwater	213,800	203
Hunting	329,410	24
Small game	176,400	26
Migratory birds	53,790	19
Big game	81,670	65
Other hunting	17,550	6
Hunting or fishing	2,735,240	41

Table 7. Expenditures by Illinois Hunters and Fishermen in Illinois, 1975

Activity	Expenditures in Illinois (Millions of dollars)	Percentage of total expenditures
Fishing[a]	306	36
Warm water	248	40
Cold water	29	27
Sea-run	25	54
Saltwater	0	0
Hunting[b]	109	70
Small game	57	81
Migratory birds	19	75
Big game	17	52
Other hunting	13	95

[a] Includes expenditures for fishing licenses, tags, and stamps, none of which were allocated by type of fishing.
[b] Includes expenditures for hunting licenses, tags, and stamps, none of which were allocated by type of hunting.

The Dollar Game: Heads They Win, Tails We Lose

CHARLES W. WILEY

Many Americans remain relatively unaware of the economic and political ramifications of the fall in the value of the dollar, despite increased media attention to the recent developments in the foreign exchange market. However, developments in the international monetary system portend potentially drastic alterations in the United States' role in world trade and finance. Among these potential changes could be a move toward denominating oil payments in currencies other than the dollar. Similar changes involving other traded commodities could reduce the use of the dollar as the world's major vehicle currency. The end result of these types of changes could even be a reduced role for the US in world trade, such as Britain experienced earlier in this century.

More important at present, however, is the fact that the current slide in the value of the dollar vis-à-vis other major world currencies is already causing important changes in some domestic economic variables. The changes in these variables, especially the inflation rate, are putting the US into a situation in which the effects of the dollar's devaluation actually induce further devaluation. At the same time, the dollar's depreciation reduces the cost of imports for the appreciating countries, especially in terms of imported oil. This reduction of inflationary pressures abroad, as will be shown, places further pressure on the dollar's value.

This article will identify some of the causes of the dollar's depreciation and discuss their implications. In the process, it will be argued that from the viewpoint of the market traders, correction of the major cause of the dollar's devaluation has taken a back seat to more traditional and theoretical prescriptions. Thus, despite attempts to prop up the dollar, it remains under intense pressure. Until the trader's major concern, inflation, is addressed in a more meaningful way by the Administration, the strength of the dollar in world monetary markets will continue to decline.

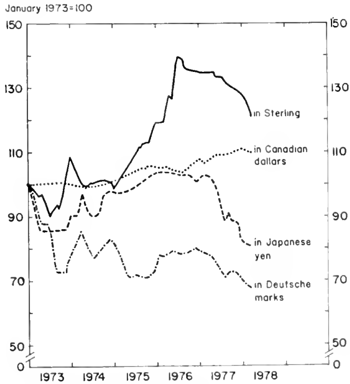
Devaluation — Theory and Reality

As one European banker recently noted, "The dollar was the downhill champion of 1977." Indeed, the dollar fell nearly 8 percent against the German mark, almost 12 percent against the Swiss franc, and more than 19 percent against the Japanese yen in 1977. Even usually weak currencies such as the French franc, Italian lira, and the British pound cost more dollars in 1977 (see chart). For most of these currencies, 1978 has brought even greater appreciation against the dollar. Only because the dollar appreciated by nearly 10 percent against the currency of our major trading partner, Canada, was the fall of the dollar on a trade-weighted basis slight.

Theoretically, under the assumption of flexible exchange rates, we should expect downward pressure on the price of a country's currency when that country is importing more goods and services than it is exporting. Because payments in world trade are most often made in the exporting country's currency, an excess of imports over exports will mean that the deficit country will be selling more of its own currency than is being demanded, and demanding more of other currencies than is being supplied. The result will be, as in any market for goods or services, downward pressure on the price of the deficit country's currency and upward pressure on the price, or appreciation, of the currencies of those countries whose products are in high demand.

When the US runs a balance of trade deficit against Japan, we expect to see downward pressure on the price of the dollar and upward pressure on the price of the yen. Consistent with these expectations, the cost of one yen rose from .0035 to .0041 dollars in 1977. Put differently, by year's end 1977, one dollar could buy 241 yen whereas at the beginning of the year, that same dol-

Value of the Dollar



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lar could buy 285 yen. As of April 1978, a dollar could be exchanged for only 218 yen and its value is expected to fall even further against the yen in 1978.

The next step in the process of currency revaluation is one in which the currency made less expensive by devaluation will at length induce greater exports from the deficit country. Conversely, a currency made more expensive by appreciation will at length induce a diminished flow of exports from the surplus country. As the dollar price of US exports falls, Japan and others will import more of the US products. Furthermore, since the dollar price of yen went up, Japanese exports become more expensive and Japan exports less to the US. The end result, it is hoped, will be a reversal of America's trade deficit and Japan's surplus. Revaluation of these two currencies will take place, in theory, until the prices of them are such that there is no excess of imports over exports in the US or of exports over imports in Japan. As long as either of these conditions prevail, however, there will be downward pressure on the dollar and upward pressure on the price of yen.

This concise theoretical plan does not always work so neatly in practice because of what economists call the secondary effects of devaluation. The two most important of these effects of devaluation are the automatic inflationary tendencies and the positive national income effect. The latter tends to increase imports in the deficit country. Each of these secondary effects works to offset the initial success of devaluation.

Higher priced imports often have two effects on domestic price levels. First, since many imports are raw materials, input costs, and most likely final prices, go up for some domestically produced finished goods. If any of these goods are then exported, the initial export price cut due to devaluation is at least partly offset. Second, higher import costs often reduce competitive price restraints on domestic producers, allowing them to raise prices. This has happened in the first and second quarters of 1978 when Ford has raised the prices of some of its compacts after Datsun and Toyota prices had risen because of the yen's appreciation. Thus, both of these cost-push pressures work to raise the domestic price level, and often force up export prices also. This inflationary impact of devaluation will be discussed in greater detail in a later section.

Successful devaluation will also raise national income as exports begin to exceed imports. However, because imports tend to rise as national income expands, the initial success of devaluation will be counteracted. The extent to which imports rise depends on many factors, as was noticeable in February. The record trade deficit in that month indicated a broad-based growth in imports, reflecting increased national income and America's continued reliance on imported oil. Furthermore, exports actually declined in February despite the dollar's depreciation. However, the Administration blamed this mainly on the coal strike and foul weather rather than on any quirks in the balance of payments adjustment mechanism.

Thus, what appears in theory to be a quick and fairly trouble-free mechanism for adjusting balance of payments disequilibriums in reality can end up exacerbating the existing problems. This may be the reason many small and open economies (high export/GNP ratio) disavow the use of devaluation in favor of import and foreign exchange controls to keep a close rein on their balance of payments. More importantly, though, these side effects of devaluation should be a strong incentive for the Administration to concentrate on the real causes of the dollar's fall. It is to these I now turn.

The Real Causes of the Dollar's Decline

Because the foreign exchange market participants are human and do not always act like someone possessed by Adam Smith's Invisible Hand, they sometimes do not react to economic events in the manner suggested by theory. Moreover, because market psychology, rather than pure economic forces, often rules foreign exchange trading, market participants often see very different causes for changes in a currency's value than do the politicians who have the means to control the value of that currency. It seems as if events within and between the international monetary system and the Carter Administration illustrate this idea well.

Even before the dollar started its dramatic fall last year, the lack of an effective national energy policy was a major concern of the new Carter Administration. The past year has brought more problems on the international scene, and even more people to blame for these problems. Thus the Administration's next scapegoats (after Congress) were the German and Japanese politicians who refused to fuel their economies so as to bring in more US exports. A not-irrational fear of inflation formed the basis for foreign reluctance toward expansionary monetary and fiscal policies.

It has also become apparent that the dollar's problems are not totally due to the high level of oil imports. For instance, the deficit induced in the balance of trade from 1975 to 1977 was more due to drastic cutbacks in exports by manufacturers and the agricultural sector than to increased imports of oil. Higher imports of oil accounted for 40 percent of the decline in balance of trade during those years. However, even had oil imports remained constant during that period, given the level of growth in GNP here compared with the rest of the world's industrial countries, our balance of trade would have gone into deficit by about $10 billion.

February's record trade deficit indicated that the trade balance is now as much a consequence of a lax or even anti-export policy as it is of higher imports of oil. Even though the US is the world's largest exporter, many firms consider exporting to be of little or no profitable value. Also, the bureaucratic rules and regulations which exporters have to deal with further impede any incentives to export. Rather than calling for greater export incentives so as to reduce the balance of trade deficit, most Americans — especially labor and the business sector — usually argue for greater protection from imports. This happens despite the estimate that $1 billion extra in exports will provide jobs for 40,000 more Americans.

The foreign exchange market responded to the record US trade deficit in February by further pushing the value of the dollar down against the mark and the yen. How-

ever, throughout most of 1977's and early 1978's slide in the value of the dollar, the market has placed more emphasis on the domestic value of the dollar as reflected in the inflation rate. Because the domestic inflation rate is the key indicator of the purchasing power of a currency, the market for foreign exchange uses this index as a major sign of the strength of that currency in the world economic order.

When the inflation rate in one country during a specific period is greater than that of another nation, the traders in the foreign exchange market often react by selling the former currency and buying the latter form of money. For example, because the inflation rate in the US in 1977 was more than double those of Germany and Switzerland, market reactions put severe downward pressure on the dollar's value and upward pressure on the mark and the franc.

Expectations of further inflation also place pressures on traders to sell a currency in the foreign exchange market. Traders assert that these expectations are often based on the growth in the money stock of a country in a given time period. Comparisons of the relative rates of monetary growth thus provides another measure of different currencies' values in the foreign exchange market. Partly because the growth in the money supply of the US has been higher than the growth in the monetary stocks of Switzerland and Japan in 1977 the foreign exchange market has forced depreciation of the dollar and appreciation of the Swiss franc and the yen over the past several months.

It appears, then, that the monetarist sentiment is strong in the foreign exchange market, as indicated by this emphasis on monetary stocks and inflation rates as keys to the foreign exchange value of a currency. However, analysis of data from the major industrial countries in 1977 indicates that this reliance on monetary indicators may be somewhat unfounded.

Inflation in the world as a whole in 1977, on the basis of the consumer price indexes (CPI) of all nations, grew by more than 11 percent. For the world's industrial countries, prices rose at an annual rate of 7.9 percent in 1977. Among these nations, only Switzerland, Germany, and Austria reported lower rates of inflation than the US's CPI growth of 6.5 percent. In terms of money supply growth, among the world's major industrial nations only Japan and Switzerland had lower rates of growth than did the US during 1977.

It seems then, that on the whole, the US did not fare too badly in 1977 in terms of inflation and growth in the money supply as compared with its major trading partners. The slight fall in the trade-weighted value of the dollar for 1977 may be a more realistic indicator of the dollar's true value than the large decreases in the dollar's exchange rates for marks, yen, and Swiss francs. Certainly, figures for inflation are still higher here than normal, but compared with the experience for the US's major trading partners, inflation rates here were less of a problem in 1977. Furthermore, money supply figures should not have given rise to much greater inflationary expectations here than they did abroad in 1977, according to the available data.

Two considerations must be taken account of when analyzing traders' preoccupations with monetary aggregates then. First, much of the decline in the value of the dollar has come during the latter half of 1977 and the first part of 1978. Since the beginning of 1978, inflation rates here have started toward double digit annual rates, while the inflation rates in Germany and Switzerland have fallen. In Japan, inflation rates in five of the last six months of 1977 were lower than in the US even though the overall rate in Japan was greater than that of the US. Thus the real worsening of the dollar's value has come when inflation here has been greater than in the three appreciating countries.

Second, it appears that speculation, more often than pure economic forces, is causing a major part of the decrease in the dollar's value. Such speculative activity is often based on ephemeral indicators, such as the growth in a nation's money supply. As with many government figures, however, the numbers for the money supply are subject to considerable revision. But the announcement of specific growth rates, whether or not they are the correct final figures, may induce speculators to change their portfolio of currencies. Indeed, several times in 1977, high yet unrevised figures for the growth rate in the money supply induced selling of dollars in the foreign exchange market. Again the reason, whether or not it had a basis in fact, was that the high growth rate caused expectations of higher inflation in the US.

Offhand remarks by government officials concerned with the dollar's value can also trigger such speculation. This is especially true when the currency is in a state of continual fluctuation. Every little indicator or comment seems to induce new speculative flows. By the same token, however, nonsubstantive remarks by the Administration about inflation may work to reduce speculation while not really offering concrete solutions to the problem.

How long this speculation forces the dollar's value downward is a matter of opinion. Usually speculation is a short-run manifestation of a long-run problem. If so, correction of high inflation rates here should do much to curb the fall in the dollar's value, at least from the viewpoint of foreign exchange traders. In the long run, however, more fundamental changes — especially in terms of better incentives for exporting — may be called for if the US is to get rid of its long-run balance of trade problem and the concomitant dollar crisis.

Consequences of the Dollar's Devaluation

One unfortunate consequence of the decline in the value of the dollar has been the loss of purchasing power for American individuals and firms abroad. This has especially hurt military personnel in Germany. Many are said to be living below the poverty level because of the high cost of marks they must pay.

A more threatening consequence of the dollar's depreciation has been the loss of purchasing power for the OPEC nations. Because payments for oil are denominated in US dollars, as the value of the dollar falls, OPEC loses revenues. A cheaper dollar means cheaper prices for oil in other countries, thus a loss of income for

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OPEC. Along with the increased price of non-US goods which the cartel nations buy, this loss of revenue is causing some of the more militant OPEC countries to demand higher oil prices. Also under consideration is a change in the pricing of oil from the dollar to another stronger currency or a group of currencies. Any of these moves would increase US import prices, push the balance of trade into further deficit, and place more pressure on the troubled dollar.

This Catch-22 situation illustrates only one of the "no win" consequences of the dollar's depreciation for the US. The most obvious example of this phenomenon again involves inflation. As was described earlier, inflation in the US induces foreign exchange traders to sell dollars and buy currencies of countries which have lower inflation rates. However, this depreciation of the dollar pushes US import prices up, and as a result, domestic inflation rises even more. One estimate of this effect is that for every cent of the dollar's overall value that is lost in world trade, the consumer price index (CPI) in the US rises by 0.02 percent. Since the beginning of 1977, then, imported inflation — because of the dollar's depreciation — has accounted for about a 1 percentage point rise of the CPI in the US. Ostensibly, this will force greater depreciation and the cycle will start again, unless actions against inflation are undertaken.

The effect of this imported inflation would have been much greater if the US were not such a closed economy (export/GNP ratio = 7 percent). This should not discount its significance, however. In fact, the effect is heightened when one considers that many of the appreciating countries are being put in a sort of "no lose" situation. That is, as their oil costs go down because of the dollar's fall, and as other import costs decline for the same reason, inflation tendencies deflate for these countries. Because many of these nations have very open economies, the effect is even more pronounced. And again, as inflation abates in the appreciating countries while it increases here, more pressure is put on the dollar.

Conclusions

Since the end of World War II, the US has been obligated to supply the international economic system with the liquidity that was necessary to facilitate increasing world trade. For the most part, this was done through unilateral foreign aid and continual balance of trade deficits. The latter method was acceptable to the rest of the world until 1971 when it became clear that the US could no longer honor its obligation to redeem all the dollars outstanding in the world for an amount of gold equivalent in value to those dollars.

That dollar crisis precipitated major changes in the rules of the international economic order. One of those changes was the move to a managed floating system for exchange rates. We have seen how this system has facilitated the depreciation of the dollar. Prior to the present system, only official governmental measures could change a currency's value, and these changes were fairly infrequent. Now, private decisions continually act along with official measures to affect the value of a currency. But it is inevitably official actions, or the absence of them, which influence those private decisions about a currency's worth in the world market.

Whether the present dollar crisis causes major changes in the rules of the international economic system will also ultimately depend on official actions, especially those of the US government. Despite the ability of private traders to affect the value of a currency, the government still has both direct and indirect control over a currency's international purchasing power. In a time when the other two major economic powers of the world are forcing the US into a sort of "no win" situation, the use of these official measures will be a major determinant of the strength of the world economy. As this article has indicated, though, it may be the lack of use of these governmental controls, especially where inflation is involved, that will create even more of an effect on the value of the dollar and the health of the world's economic system.

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Economy Surges — Money Supply Balloons

The economy has bolted forward and the money supply has expanded to accommodate the increased activity. Even though there is a great deal of talk about a tightening in monetary policy, money supply growth has, in fact, accelerated. Reflecting the strengthening in the economy, interest rates have moved higher.

It is now clear that business activity has recovered fully from the winter-induced lull. Production has risen sharply; the labor market has tightened; and consumer spending has picked up. Unfortunately, as the economy improved the rate of inflation rose sharply.

Increased Monetary Ease

Since mid-March, the money supply has expanded at more than a 12 percent annual rate (see chart). During the January to March period, while the economy was stalled, the money supply was virtually stable. In the preceding year, the stock of money grew almost 8 percent.

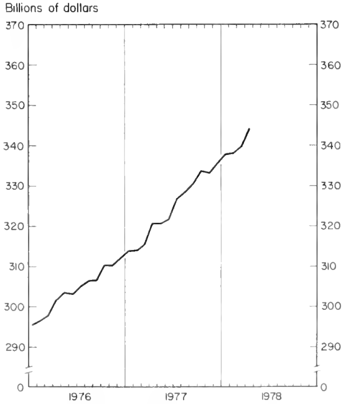
It is not unusual for the money supply to move in fits and starts. The Federal Reserve gears its operations toward achieving or maintaining an appropriate "tone" in the money market. Put differently, the Fed seeks to avoid abrupt changes in credit markets. More specifically, its very short-run operations are directed toward monitoring the federal funds rate (the rate charged by banks for lending reserves to one another).

Federal Reserve concern for the stability of sensitive credit markets introduces changes in important monetary aggregates (such as bank reserves and the money supply). During periods when the federal funds rate is tending to move higher, the Fed often moderates, or cushions, the increase. To do this, it takes actions to increase the availability of reserves. Conversely, when the federal funds rate is tending to move lower, the Fed often softens its decline. To do this, it takes actions to reduce the availability of reserves.

Interest rates of virtually all maturities have risen since mid-March. For example, the federal funds rate has risen more than half a percentage point (see chart). The Fed increased the discount rate — the rate charged by Federal Reserve Banks for loans to member banks — in early May from 6.5 to 7 percent.

It comes as no surprise, therefore, that the money supply is expanding rapidly (suggesting monetary ease) at the same time that interest rates are moving higher (suggesting monetary tightening). An important economic policy issue is whether, on balance, current monetary actions are expansive or restrictive. Unfortunately,

Money Supply



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Inter-American Economic System *By W. Baer and D. V. Coes / Page 6*

this is one of the quagmires of economics. Monetarists assert that current monetary growth is excessive and will lead to an intensification of inflation. Most other economists would probably assert that recent and current increases in interest rates will tend to limit the pace of future economic expansion.

Renewed Economic Expansion

Output has expanded sharply since the depth of winter. Industrial production, after declining in January, has since risen at an 11.7 percent rate per annum (see chart). Output rose at a 15.6 percent annual rate in April. Increases were broadly based, but were especially strong in autos and primary metals. The April rate was up 4.7 percent from April 1977, and the capacity utilization rate reached 83.2 percent — the highest in several years.

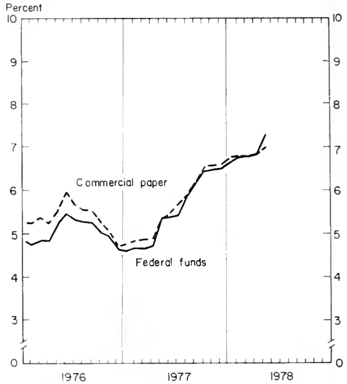
Home-building has also recovered. April housing starts were at a 2.2 million unit annual rate, virtually the same as in December. Notwithstanding the strong improvement since January, housing starts so far this year have averaged more than 10 percent lower than during the second half of last year.

The labor market has registered impressive gains thus far in 1978. Employment jumped upward at a 7.1 percent rate in April, and has risen at a 4 percent rate since January. Increases in jobs have been more rapid than the growth in the labor force. As a result, unemployment has declined, reaching 6 percent in mid-April.

Consumer spending has picked up, reflecting improvements in jobs and household incomes. Retail sales spurted upward at a 24 percent annual rate in April, with chief gains in auto sales. On a year-over-year basis, retail sales were up 9.3 percent. However, most of the increase resulted from inflation. The physical volume of sales rose less than 3 percent.

Inflation has moved sharply higher. Wholesale prices have risen at more than a "double-digit" rate since October. Consumer prices have increased at more than a 10 percent rate since February. As a result, inflation forecasts for 1978 have been revised upward. Earlier, the Administration forecasted a rate of 6 percent to 6.25 percent; currently, the forecast is for a rate of 6.75 percent to 7 percent.

Interest Rates



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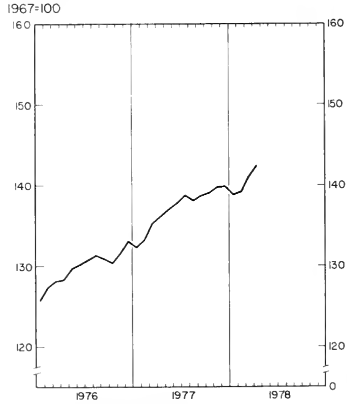
Industrial Production



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It is my view that, given recent rates of money supply growth, both inflation and interest rates are subject to further upward pressure. A moderation in inflation is unlikely until money supply growth is brought more closely into alignment with the growth in real output.

WILLIAM R. BRYAN

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Local Illinois Developments

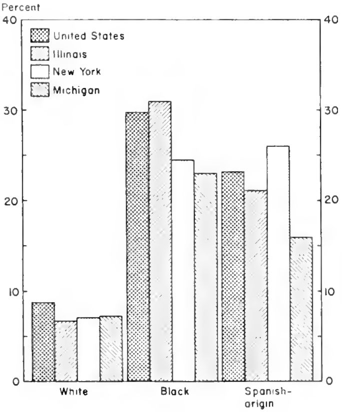
Poverty in Illinois

The Bureau of the Census recently released the results of the Survey of Income and Education taken in April through July 1976, which provides estimates of families, unrelated individuals, and persons by money income and poverty status in 1975. The survey updates the 1970 Census money income and poverty estimates.

The concept and definition of poverty is complex and has been the subject of a number of studies by government agencies. The poverty statistics presented in this report are based on a definition developed by the Social Security Administration in 1964 and revised by a Federal Interagency Committee in 1969. Annual revisions of the SSA poverty thresholds were originally based only on the average per capita cost of the foods in the economy food budget, but now reflect changes in the consumer price index. The thresholds are computed on a national basis only.

In Illinois in 1975, 577,000 people in families with female head, no husband present, were below the poverty level — 42.3 percent compared with 35.2 percent nationally. Of the people living in female-headed families with related children under 18, 56.9 percent (382,000) lived in poverty; the national figure for this category was 49.0 percent. In all Illinois families, 936,000 persons were below the poverty level — 9.4 percent compared with 10.0 percent in the nation as a whole. There were 546,000 people in families with related children under 18 below the poverty level, 16.1 percent compared with 15.3 percent nationally.

Percentage of Three Racial Groups Below Poverty Level, 1975



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Illinois Business Indexes

Item	Mar. 1978 (1967 =100)	Percentage change from	
		Feb. 1978	Mar. 1977
Employment-manufacturing[1]	88.8[a,b]	- 0.0	+ 0.7
Weekly earnings-manufacturing[1]	213.5	+ 0.9	+ 8.0
Consumer prices in Chicago[2]	186.3	+ 1.1	+ 8.1
Life insurance sales (ordinary)[3]	297.7	+ 23.9	+15.7
Retail sales[4]	219.0[a]	+ 20.7	+ 1.7
Farm prices[5]	211.0	+ 3.9	+ 7.1
Building permits-residential[4]	90.6	+112.2	-27.6
Coal production[6]	8.0	...	-91.8
Petroleum production[7]	37.9	+ 5.5	-17.7

[1]Ill. Dept. of Labor; [2]US Bureau of Labor Statistics; [3]Life Ins. Agcy. Manag. Assn.; [4]US Dept. of Commerce; [5]Ill. Crop Rpts.; [6]Ill. Dept. of Mines; [7]Ill. Geol. Survey.

[a]Preliminary. [b]Data for February 1978 compared with January 1978 and February 1977.

Of 9,181,000 whites in Illinois in 1975, 6.7 percent were below the poverty level; of 1,685,000 blacks, 31.0 percent lived in poverty; and of 412,000 people of Spanish origin, 21.1 percent received poverty-level incomes. The position of Illinois was somewhat better than the national level for whites and people of Spanish origin, but not as good for blacks (see chart, which also shows two other large industrial states).

The low-income concept has been developed in order to identify, in dollar terms, a minimum level of income adequacy for families of different types in keeping with American consumption patterns. The national income threshold for a nonfarm family of four with male head and two children under 18 years of age was $5,456. For a single male under 65 years of age the poverty threshold was $2,902; for a single female under 65, $2,685.

The findings of a recent detailed review of the poverty definition are summarized in *The Measure of Poverty*, available from Mr. George Grob, Department of Health, Education, and Welfare, Room 445-G Humphrey Building, Washington, DC 20201.

Chemicals and Allied Products

The chemicals and allied products industry includes "those establishments producing basic chemicals, and establishments manufacturing products by predominantly chemical processes." Included are producers of basic chemicals, synthetic fibers and plastics, drugs, paints, soaps, and agricultural chemicals.

The value of shipments of these establishments reached an estimated $112 billion in 1977. US employment in the industry averaged about 885,000 workers last year. In foreign trade the chemicals industry has long been a major contributor toward a favorable trade balance. In 1977 the value of total exports of the chemicals industry exceeded imports by $5.2 billion.

Several factors have clouded the growth potential for the chemicals industry. A significant proportion of capital outlays has recently gone toward meeting environmental and safety regulations. It has been estimated that about 12 percent of the industrial organic chemical industry's annual production costs are for meeting worker safety, health, and environmental standards. In addition, a new and controversial Toxic Substance Control Act (1977) may also have an important impact on the industry's long-run growth. But the predominant problem facing the industry has been the adjustment to a changing energy/economic environment. The industry is the largest manufacturing consumer of energy and also has the highest level of cost dependence on energy, since it is important both as a fuel and as a feedstock. This is especially reflected in the fact that between 1973 and 1977 the wholesale price index for the chemicals industry as a whole rose more than 175 percent.

Much of the chemicals and allied products industry is frequently referred to as the petrochemical industry. At present the petrochemical industry requires about 7 percent of the energy resources used annually in the US — 3 percent as feedstocks for plastics and fertilizer and 4 percent for fuel. The mix of fuel resources used is uneven — the industry takes 10 percent of the natural gas consumed in a year, 21 percent of the natural gas liquids, 4 percent of the crude oil, 6 percent of coal, and 8 percent of electricity. In the longer run, coal offers a substantial source of feedstock but for the time being economics does not permit its exploitation.

Industry Divisions

The production of industrial organic chemicals accounts for about 23 percent of the output of the chemical and allied products industry. These firms provide the basic building block chemicals needed as feedstock for other processes. Industrial organic chemicals include both cyclic compounds (intermediate chemicals, dyes, pigments, and coal tar crudes) and acyclic compounds (solvents, flavor and perfume materials, plasticizers, leather agents, rubber processing chemicals, and other specialty products). Over 80 percent of the industry's raw materials are derived from petroleum and natural gas. Illinois is a major producer of cyclic crudes and intermediates. In 1975, 12 firms employing 2,500 workers were making these products. An additional 2,250 were employed in the manufacturing of miscellaneous other organic chemicals. The value of the state's shipments of industrial organic chemicals (more than $610 million in 1975) accounts for approximately 3 percent of the US total.

The second largest group includes manufactures of drugs — pharmaceutical preparations, biological products, medicinals, and botanicals. In 1975 the value of shipments from firms operating in Illinois totaled nearly $880 million — about 7.8 percent of the US total. Almost 14,000 are employed at 72 plants in Illinois producing drugs. Included in this group of firms are several large nationally known manufacturers. Abbott Laboratories is the state's largest employer in the industry — about 7,000 people are employed at its North Chicago plant.

Another important group manufactures plastic materials and resins. In 1975, 28 firms were engaged in producing plastic materials and synthetics valued at approximately $530 million. Total state employment numbered over 2,600 that year.

Illinois is also a primary producer of a host of other products which come under the chemicals and allied products heading. It is a major manufacturer of soap and toilet goods; in 1975 more than 11,500 individuals were employed in 180 firms across the State. Illinois accounts for about 12 percent of the US total employment in this industry. Approximately 2,400 workers in 22 firms produce agricultural chemicals (including nitrogenous, phosphatic, and mixed fertilizers). Another 260 firms produce industrial inorganic chemicals and a broad spectrum of "miscellaneous" chemicals such as adhesives, explosives, printing ink, and carbon black. About 9,800 workers are employed in the manufacture of these products.

Taken together, more than 52,600 are employed in the chemicals and allied products industry in Illinois — about 6 percent of the US total. The value of all products in the industry surpassed $5.7 billion in 1975. Included among the state's manufacturers are many of the nation's leading chemical concerns.

Pollution Abatement Expenses

Firms in the industry have spent enormous sums for pollution abatement in recent years. In 1976 abatement expenditures of chemical manufacturers operating in Illinois totaled $20.5 million. Another $36 million went for operating costs and payments to government units (for public sewage treatment and solid waste collection and disposal). The chemical industry as a whole has spent an average of more than 10 percent of its total capital expenditures each year for pollution abatement; this compares with a 5.5 percent average for all industries. Only the primary metal industries spend larger sums for pollution control.

MICHAEL TREBING

Comparative Economic Data for Selected Illinois Cities, [illegible] 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		n.a.	3,608.7[a]	$46,142[a]	4,861	[illegible]
Percentage change from	Feb. 1978		*-3.2*	*+8.1*		
	Mar. 1977		*+10.9*	*+10.9*		
NORTHERN ILLINOIS						
Chicago		n.a.	1,816.0	$35,951	3,104[b]	6.6[b]
Percentage change from	Feb. 1978		*-2.1*	*+10.6*		
	Mar. 1977		*+7.6*	*+9.3*		
Aurora		$ 2,171	148.5	$ 539	36	4.3
Percentage change from	Feb. 1978	*+94.0*	*+1.7*	*+12.0*		
	Mar. 1977	*-21.3*	*+3.7*	*+8.6*		
Elgin		$ 1,943	93.9	$ 619	26	5.2
Percentage change from	Feb. 1978	*+39.5*	*-2.3*	*+0.0*		
	Mar. 1977	*-14.7*	*+16.9*	*+20.8*		
Joliet		$ 1,768	408.3	$ 310	44	4.3
Percentage change from	Feb. 1978	*+116.6*	*-0.4*	*-0.9*		
	Mar. 1977	*-30.7*	*+12.1*	*+11.9*		
Kankakee		$ 95	78.2[c]	$ 134	13	8.1
Percentage change from	Feb. 1978	*-87.2*	*-6.7*	*-38.6*		
	Mar. 1977	*-68.0*	*+12.0*	*-2.1*		
Rock Island-Moline		$ 6,177	116.1[d]	$ 1,151	[illegible]	[illegible]
Percentage change from	Feb. 1978	*+1,142.3*	*-3.3*	*-5.2*		
	Mar. 1977	*+70.1*	*+14.9*	*-5.1*		
Rockford		$ 3,184	162.8	$ 915	67	[illegible]
Percentage change from	Feb. 1978	*+150.7*	*-8.3*	*+5.2*		
	Mar. 1977	*-8.7*	*+5.5*	*+14.0*		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 3,707	43.8	$ 833	57[b]	5.9[b]
Percentage change from	Feb. 1978	*+244.5*	*+17.7*	*-0.2*		
	Mar. 1977	n.a.	*+8.1*	*+2.2*		
Champaign-Urbana		$ 1,519	48.0	$ 685	[illegible][b]	5.9[b]
Percentage change from	Feb. 1978	*+21.9*	*-4.5*	*-2.8*		
	Mar. 1977	n.a.	*-1.8*	*+7.1*		
Danville		$ 612	43.4	$ 202	17	9.5
Percentage change from	Feb. 1978	*-35.7*	*-9.9*	*-9.0*		
	Mar. 1977	*+44.0*	*+10.3*	*-44.5*		
Decatur		$ 2,871	114.8	$ 453	[illegible]	[illegible]
Percentage change from	Feb. 1978	*+297.6*	*-7.1*	*+4.8*		
	Mar. 1977	*+21.1*	*+14.4*	*-2.5*		
Galesburg		$ 391	32.0[c]	$ [illegible]	[illegible]	8.4
Percentage change from	Feb. 1978	*+202.0*	[illegible]	*-5.8*		
	Mar. 1977	*-25.4*	*+9.2*	*-8.8*		
Peoria		$ 3,345	195.5	$ 1,271	160[b]	6.3[b]
Percentage change from	Feb. 1978	*-43.6*	*-8.9*	*+3.7*		
	Mar. 1977	[illegible]	*+17.0*	*-4.2*		
Quincy		$ [illegible]	40.3	$ 198	20	10.4
Percentage change from	Feb. 1978	*+141.3*	[illegible]	*-5.7*		
	Mar. 1977	*+98.7*	[illegible]	*-1.0*		
Springfield		$ 3,959	[illegible]	$ 1,685	88[b]	7.0[b]
Percentage change from	Feb. 1978	[illegible]	[illegible]	*+3.3*		
	Mar. 1977	n.a	*+7.8*	*-2.6*		
SOUTHERN ILLINOIS						
East St. Louis		$ [illegible]	27.2	$ 166	21	[illegible]
Percentage change from	Feb. 1978	[illegible]	*+0.3*	[illegible]		
	Mar. 1977	[illegible]	[illegible]	*+4.4*		
Alton		$ [illegible]	[illegible]	$ 120	14	9.4
Percentage change from	Feb. 1978	[illegible]	[illegible]	[illegible]		
	Mar. 1977	[illegible]	[illegible]	[illegible]		
Belleville		[illegible]	25.9	[illegible]	[illegible]	[illegible]
Percentage change from	Feb. 1978	[illegible]	*-4.4*	[illegible]		
	Mar. 1977	[illegible]	[illegible]	[illegible]		
Carbondale-Murphysboro		[illegible]	32.4	304	[illegible]	[illegible]
Percentage change from	Feb. 1978	[illegible]	[illegible]	[illegible]		
	Mar. 1977	[illegible]	[illegible]	[illegible]		

[1]Local sources; data include federal construction projects. [2][illegible] power companies. [3]Local post office reports; accounting period ending 24 March 1978. [4]Illinois Department of Labor; preliminary data for February 197[illegible].

[a]Total for cities listed. [b]Data for standard metropolitan statistical areas. [c]Includes immediately surrounding territory.

[d]Includes East Moline. n.a. Not available.

Changes in the Inter-American Economic System

WERNER BAER AND DONALD V. COES

Economists view the "Inter-American Economic System" as a network of trade, investment, and financial relationships linking the United States and Latin America. Our central focus here is on the change in the United States-Latin American economic relationships since the early part of this century and on the distribution of the benefits of these economic interactions.

When viewed from the United States, the degree of economic interrelationship with Latin America in the 19th century was small on both the export and the investment side. Latin America accounted for less than 8 percent of US exports in 1880 and still less than 10 percent by 1900. Until the last two decades of the 19th century US foreign investments were negligible, as might have been expected of a young economy with ample internal uses for its capital. There was a stronger link on the import side, however. In 1880 almost 27 percent of US imports originated in Latin America and until World War II Latin America's share in US imports hovered around 25 percent. Latin American trade ties with the US were closer. In 1900, more than 28 percent of its exports were shipped to the US and about 25 percent of its imports originated in the US.

Although US capital began to move into Latin America late in the 19th century, it was still a small proportion of total investment in the region. In 1900 almost 70 percent of foreign investments were owned by British capital and only 10 percent by US enterprises. This was to change rapidly in the first decades of the 20th century.

As the US was more dependent on Latin America for imports than as an export market, early US investments were made principally in primary agricultural and extractive production (for example, sugar in the Caribbean, bananas in Central America, and copper mining in the Andean countries). These initial investments were followed by investments in transportation, power generation, and the economic infrastructure necessary to make the primary investments more productive.

Werner Baer, professor of economics at the University of Illinois, Urbana-Champaign, is the author of a number of books and articles on economic development in Latin America. His most recent book, *The Economic Growth and Development of Brazil* (GRID Publishing, Incorporated), will appear in late 1978. After receiving his Ph.D. at Harvard, Professor Baer taught at Yale and Vanderbilt before coming to Illinois.

Donald Coes, an assistant professor of economics at UIUC, received his Ph.D. from Princeton, and studied exchange rate policies as a Fulbright Fellow in Brazil in 1974 and 1975.

Between 1900 and 1930, the US increasingly rivaled Great Britain in the area and gradually became the principal supplier of the region's manufactured goods and the principal buyer of its primary products. By the end of the 1920s the share of the Latin American market in US exports had grown to about 19 percent, and imports from Latin America still represented 25 percent of the US total. The US market accounted for 32 percent of Latin American exports in the late 1920s and almost 40 percent of its imports.

The destruction and disruption of trade and investment in the Old World as a consequence of World War II reinforced US dominance of economic relationships in this hemisphere. The relative importance of Latin America to the US also increased: in 1950, 28 percent of US exports went to Latin America and 35 percent of its imports originated there (Table 1). From Latin America's point of view, 35 percent of its exports went to the US in 1948 and almost 63 percent of its imports originated there. The US represented 51 percent of foreign investments in the region by 1950.

The Import-Substitution Era

From this brief description, it can be seen that the Inter-American Economic System which prevailed until the early post-World War II period can be characterized as a "center-periphery" relationship. The US increasingly replaced Great Britain as the "center" country. Since most Latin American economies were totally geared to the export sector, specializing in a small number of primary goods, they were totally dependent on the rate of

Table 1. US Trade with Latin America

Year	Exports as percentage of total US exports	Imports as percentage of total US imports
1945	14.1	42.1
1950	27.9	35.0
1960	17.4	24.1
1970	13.8	12.0
1976	13.5	10.9

Sources: US Department of Commerce, Statistical Abstract and Historical Statistics, Colonial Times to 1970.

economic activity at the "center." A decline in US economic activity would be reflected in a decline, often magnified, of economic activity in the Latin American economies, which had few independent means to engage in countercyclical programs.

The Great Depression convinced many Latin Americans in the larger countries that there might be an escape from dependence on the world's industrial centers. The drastic decline of their foreign exchange earnings in the early 1930s with the fall in center countries' incomes forced them to curtail imports. The resulting shortages of manufactured goods and their increased relative prices provided the necessary incentives for a rapid growth of import-substitutive industries. This, in part, enabled such countries as Argentina, Brazil, and others to recover from the shock of the depression in a relatively short time.

These circumstances continued into the early post-World War II period. Import substitutive industrialization (ISI) was felt to be an essential strategy for development and as a way to change the dependency relationship. The ISI drive of many Latin American countries in the 1950s and early 1960s was aimed principally at the reduction of the import coefficient — the ratio of imports to national income. Most of the major countries emphasized industrialization on an across-the-board basis, with little effort made to identify areas in which scarce resources such as capital and skilled labor would be used most efficiently. Little was done to encourage their customary exports or develop new ones, since the aim was to insulate Latin American economies from the vagaries of the world economy by making them as autarkic as possible.

Post-ISI Dependency

By the mid-1960s it had become clear that ISI had not increased the economic independence of Latin American countries, but had only changed the nature of the link with the United States and a few other industrial countries. ISI had led to a drastic change in the commodity composition of imports. The share of finished manufactured products declined while the import of raw materials (oil, coal, minerals) and capital goods increased.

As the industrial sectors of Latin American economies grew both absolutely and relatively, essential industrial inputs and capital goods imports could not be compressed and the import coefficient actually began to rise again. Thus the major economies were paradoxically more vulnerable to balance of payments difficulties than they had been before ISI. Any reduction in essential imports, unlike interruptions in the supply of imports of consumer goods, was likely to result in severe industrial disruption and stagnation. As most Latin American economies had not changed their export commodity structure along with changes in their internal structure (they still relied for their export earnings on their usual primary products), the risk of facing industrial stagnation because of import constraints had become very high.

By the mid-1960s most of the large countries were responding to this problem with export diversification programs. These consisted of combinations of exchange rate readjustments in the face of inflation (that is, establishing policies to avoid the overvaluation of their currencies, thus keeping their exports from being priced out of world markets), tax and credit incentives for exporters, and various types of administrative and institutional reforms designed to facilitate exporters' penetration of new markets.

With the industrialization of the major countries there also occurred major changes in the structure of foreign investments. For a number of reasons investments in primary production and public utilities declined. As a result, new foreign investment after World War II was concentrated in the growing manufacturing sector, where the rewards for foreign technology were higher. It is ironic that despite the fact that one of the goals of industrialization was to increase the economic independence of Latin American countries, the achievement of industrial growth was in large part based on the attraction of foreign (at first mainly US) capital, which made those countries dependent in a new way.

Current Ties with the US: A Summary

Trade. In the last two decades Latin America's exports have become increasingly diversified in both their commodity composition and geographic destination (Tables 2 and 3). One of the most striking trends has been the rise of manufactures. By the mid-1970s there was also a greater geographical balance of exports, the US share having declined from 48 percent in 1950 to 32 percent in 1975. On the import side one notes the dominance of industrial raw materials and machinery (imported inputs) and an increased diversification of the sources of imports, although the US still accounted for almost 36 percent of imports.

The tendency toward greater geographical diversification in Latin American exports arises from a number of causes. Among them is the more rapid growth of incomes in developed countries other than the United States, notably in Japan and West Germany. Many Latin American countries have tended to keep their currencies linked in real terms to the dollar, so that as the dollar has declined against the yen, the deutsche mark, and some other major currencies, Latin American exports have become relatively less expensive in Japan and Western Europe. Still another factor is the potentially greater trade complementarity between some Latin American economies and developed nations other than the US.

Foreign Capital. Geographical diversification is also notable in the origin of foreign investments for some of the larger countries. The share of the US investment in Brazil declined from 48 percent in 1950 to 32 percent in 1976; the US share declined from 73 percent to 54 percent in Mexico between 1950 and 1969 (Table 4). From a US perspective, moreover, Latin America became relatively less important as a destination for US direct investment, despite its rise in absolute terms, falling from almost 47 percent of total US investment flows in 1929 to about 13 percent in the mid-1950s. Latin America is still, however, the principal investment outlet of the US in the Third World. Examining the sectoral composition of US investments in Latin America, one notes a sub-

Table 2. Commodities Traded by Latin American Countries (Percentage distribution)

Period and commodity group	Latin America	Argentina	Brazil	Mexico	Venezuela	Colombia
	Exports					
1960-61[a]						
Food	46.1	63.1	71.9	38.8	1.3	76.0
Ag. raw materials	13.7	32.0	16.1	24.6	---	3.3
Fuels	20.9	0.1	1.3	3.5	91.7	18.0
Minerals	6.8	0.6	7.1	9.3	6.9	---
Manufactures	12.5	4.2	3.6	23.8	0.1	2.7
1970-71[a]						
Food	37.6	68.7	57.7	38.6	1.4	72.1
Ag. raw materials	8.1	16.6	15.3	8.2	---	6.3
Fuels	29.0	0.4	0.7	2.8	91.0	10.4
Minerals	7.2	0.3	9.9	7.8	5.7	---
Manufactures	18.1	14.0	16.4	42.6	1.9	11.2
Mid-1970s[b]						
Food/tobacco/beverages	29.1		24.0			
Ag. raw materials	---		17.0			
Other raw materials	12.2		10.0			
Fuels	38.7		---			
Manufactures	19.5		34.0			
Other	0.5		15.0			
	Imports[c]					
1960						
Food and raw materials	22.7	26.7	26.9	17.1		
Fuels and lubricants	16.0	12.5	19.2	2.4		
Machinery and equipment	35.1	43.9	35.7	51.6		
Other manufactures	26.2	16.9	18.2	28.9		
1973						
Food and raw materials	19.2	36.5	19.0	20.8		
Fuels and lubricants	12.6	4.7	13.5	4.8		
Machinery and equipment	39.1	30.7	39.8	48.4		
Other manufactures	29.1	28.1	27.7	25.8		

[a] Inter-American Development Bank, Economic and Social Progress in Latin America, 1976 Report.

[b] Latin America, 1974, IDB, 1976 Report; Brazil, 1976, Banco Central do Brasil, Boletim.

[c] International Bank for Reconstruction and Development, World Tables 1976.

stantial increase of investments in manufacturing and a decline in mining (Table 4). The share of US investments in Latin American public utilities had fallen to only 2 percent of total US investment in 1976.

Foreign Indebtedness. By 1975 the total public and officially guaranteed foreign debt of Latin America was approximately $50 billion. Taking into account the total debt, which would include loans made without public backing, the estimate stood at about $67 billion at the end of 1975. In the mid-1970s about 51 percent of the public debt was owed to private financial institutions and suppliers, 22 percent to multilateral agencies (such as the World Bank), and 27 percent to individual governments. Although there is no official breakdown on the specific geographic origin of the debt, it is fairly certain that more than half the private debt is owed to US institutions, and more than half of the bilateral governmental debt is also owed to the US. The debt owed to multilateral agencies is also sensitive to US influence, since in most of them the US representative has proportionately the greatest influence.

Current Nature of Economic Relations

Trade. The increased commodity and geographic diversification of Latin America's trade has contributed toward strengthening the region's position vis-à-vis the United States. The commodity diversification of exports has increased the possibilities of more rapid growth in foreign exchange earning capacity and decreased the risks associated with overdependence on a few export commodities. The geographic diversification of the region's exports and imports has diminished its dependence on the level of US economic activity and increased its bargaining strength.

The necessity for export diversification in the post-ISI era, however, and the dependence on imported inputs of the new industrial sectors have made Latin America more interdependent with the industrial centers than was originally envisioned. Exports of manufactured goods, like those of primary products, are dependent on the level of economic activities in the US, Europe, and Japan. To the extent that these economies fluctuate independently, Latin America's geographic diversification will have paid off in softening the transfer of the business cycle. The more the cycles are synchronized, as they appear to be in the contemporary world economy, however, the less isolated from center fluctuations will the Latin American economies be.

Multinationals. Since many of the most dynamic industries of Latin America are owned or controlled by multinational enterprises, a new type of interdependency between the region and the center countries (notably the US) has emerged. First, in pursuing export diversification Latin American governments have relied on, and often encouraged, the subsidiaries of multinationals to export a certain proportion of their production. Second, in a number of Latin American countries a significant portion of the exports of multinationals consist of semifinished products, increasingly integrating these economies into a vertical division of labor. For example, some automobile companies produce engines in Brazil or Mexico for cars assembled elsewhere, and plans are being made for joint ventures to produce semifinished steel products in Brazil.

It remains to be seen how much decision-making autonomy is thus sacrificed within Latin America as it becomes a more integrated piece of an international sys-

Table 3. Percentage Distribution of Latin American Trade, by Area

Area	1950	1960-64	1970-74	1975
	Exports			
United States	48.3	36.7	32.8	32.1
Canada		3.3	3.7	4.1
EEC		29.4	23.9	20.1
Japan		3.2	5.0	4.6
Latin America		9.6	13.7	14.3
Rest of world		17.8	20.9	24.8
	Imports			
United States	50.1	42.0	35.2	35.9
Canada		3.0	2.8	2.3
EEC		27.6	23.7	21.7
Japan		3.5	7.2	7.6
Latin America		12.6	17.6	19.4
Rest of world		11.3	13.5	13.1

Source: Inter-American Development Bank, Economic and Social Progress in Latin America, 1976 Report.

tem of production. The level of production of the subsidiaries of multinationals, especially those which are vertically integrated on an international level, thus depends on decisions of multinationals concerning their world production objectives, such as the international division of their activities.

International bargaining for shares in the international production scheme of multinationals is still in its infancy. On the Latin American side, the multinationals increasingly are feeling the pressure of governments which are interested in pushing their export diversification programs. They are feeling both the political pressure of the governments and are also attracted by tax incentive schemes designed to increase exports. In the United States, on the other hand, there has been a mounting pressure by labor unions and other interest groups to limit the expansion of overseas production facilities of US-based multinationals, on the ground that such operations in effect "export" American jobs.

It has become increasingly clear in the 1970s that one cannot view US-Latin American economic relations as consisting of one group of US interests versus another group of united Latin American interests. On each side one can identify conflicting interests. For instance, pressured by labor unions and some multinationals, the US government in 1977 demanded the abandonment of export incentive arrangements by Brazil on the ground that these incentives violate GATT rules. It also demanded the reduction of import barriers which have hindered the import of capital goods, replacement parts, and other production inputs used by US multinationals. In 1977 Brazil managed to eliminate its trade deficit, reducing its large current account deficit, partly as a result of its export incentives and import restrictions. Abandonment of these measures would once again open up a substantial trade gap. Given Brazil's large debt, this would work to the detriment of the country's creditworthiness and, because of Brazil's size, jeopardize the portfolios of its creditors, many of whom are US banks. This is an example of the type of split in US economic interests — labor unions and some multinationals versus banks — which make contemporary relations most complex.

Another aspect of the presence of multinationals in complicating economic and political relations can be found in the conflicting goals of multinationals and host governments, on the one hand, and groups which are dissatisfied with the current functioning of Latin American society and the distribution of the benefits of economic growth, on the other. The presence of multinationals in some of Latin America's most important industries, for instance, may give them a vested interest in the existing production profile of the region. They will either resist efforts to redistribute income, which could threaten their markets, or they will use advertising, credit arrangements, and other sales tools to "distort" the demand profiles of lower income groups, persuading them to buy products (consumer durables) which are not necessarily in the interest of those groups. Although North Americans might reject this argument on the basis of "consumer sovereignty," in Latin America the relative unfamiliarity of large sectors of the population with both

Table 4. US Direct Investments in Latin America (Percentages)

A. Share of total US investments abroad[a]				
1929	46.7			
1950	37.7			
1960	23.5			
1970	14.7			
1975	13.2			
B. US share of foreign direct investments[b]				
	1950	1969	1976	
Argentina	44.5	65.8		
Brazil	48.0	45.0	32.0	
Chile	87.1	82.8		
Mexico	73.3	54.0		
Latin America	51.1			
C. US direct investment by sector[c]				
	1929	1950	1960	1976
Mining and smelting	21	15	14	7
Petroleum	17	28	35	12
Manufacturing	7	17	18	39
Other[d]	55	40	33	42[e]

[a]US Department of Commerce, Statistical Abstract and Survey of Current Business.

[b]CEPAL, Tendencies y Estructuras de la Economia Latinoamericana; and Banco Central do Brasil, Boletim.

[c]Richard S. Newfarmer and Willard F. Mueller, Multinational Corporations in Brazil and Mexico; US Department of Commerce, Survey of Current Business.

[d]Includes agriculture, trade, public utilities, finance, and miscellaneous nonmanufacturing industries.

[e]Includes public utilities, 2 percent.

the opportunities and the complexities of modern markets suggests that the problem cannot easily be dismissed.

As most multinationals do not develop their technologies in their foreign subsidiaries, industrialization has led to a substantial increase in Latin America's dependence on foreign technologies. Against the positive effect of the transfer of technologies which might have been considerably more difficult to acquire independently, one must include the additional burden on the balance of payments created by the need to pay for the new technology. Although these costs are sometimes direct and clearly identifiable, they may also appear in the form of overpriced inputs imported by the subsidiary from its parent or as underpriced exports sent to the parent. As neither the technology nor its true cost is usually well defined, the payments generated by technology transfers are likely to continue to be a growing bone of contention between host governments and the multinationals, as well as involving the US and other countries in which the multinationals are based.

Closely related is the issue of adequacy of the technology transferred. Few adaptations to local conditions have been attempted by multinationals and, more important, most multinationals have a policy of developing new technology in the home country. Since control of technology gives those firms their basic bargaining power

with host governments, they are reluctant to carry out basic research away from home. This is in direct conflict with the desire of Latin American countries to increase their share of frontier research in technological development.

Related to the issue of payments for technology transfers by multinationals is the larger question of the net balance of payments effect of the multinationals' presence. Although the abstract, static models of economic theory tend to present investment and other factor movements as a substitute for trade flows, a growing, increasingly interdependent world economy appears to offer little empirical support for this argument. Indeed, it is ironic to note that US-based multinationals have defended themselves against the charges by American labor and allied groups that they "export jobs" by arguing that they in fact increase the demand for American exports by the countries in which they invest. Despite the lack of conclusive empirical evidence for or against this argument, if it is true, it is small consolation for Latin American countries with balance of payments problems to hear they are stimulating developed countries' exports.

Implications of Latin American Indebtedness. Accompanying the rise in direct foreign investment since World War II has been an equally massive, nonequity financial capital flow of both private and public lending. This trend has accelerated in the past decade as the larger Latin American nations, led by Brazil and Mexico, have gained increasing access to world capital markets. Such capital flows, from the receiving countries' point of view, have the advantage of permitting them to retain management control of the investment, especially when it is undertaken by a public or government-backed enterprise. In addition, such borrowing may actually be cheaper. Larger countries like Brazil have paid up to 2 percent above the London Inter Bank Official Rate (analogous to a world prime rate), giving a net rate of between 9 and 12 percent. Rates of return on equity capital, however, have been estimated to range between 12 and 20 percent. Although its validity is compromised by the elements of greater risk inherent in equity investments, as well as their implicit payments for potential technology transfers and management services, such a comparison suggests that loans may be preferable from the receiving countries' points of view.

Whatever its merits, however, there is little question that the large debts of Brazil, Mexico, Peru, and Argentina have a number of costs. Substantial proportions of the foreign exchange earned by these countries must be used to finance the debt. The price of any new financing required is higher because of the large amount of debt already outstanding. The debt places these countries at a bargaining disadvantage with the major creditor countries and with institutions dominated by those countries, such as the IMF and the World Bank. This disadvantage may be translated into a certain degree of foreign interference in domestic policymaking, such as the tying of new loans to specific internal credit or exchange rate policies. Finally, the increased indebtedness may make the borrowing countries more vulnerable to pressure by creditor nations. This might take the form of requests for more lenient treatment of multinationals operating in the borrowing countries or even in pressure for an increasing share of foreign capital in indebted local firms.

One might argue, however, that the indebtedness of a country as large and important as Brazil (debt in early 1978, US$32 billion), Mexico (debt in early 1978, more than US$25 billion), or even Peru (debt in late 1977, about US$6 billion) gives their governments some bargaining strength. The large stake of both multinationals and the larger banks in the United States and other developed country financial centers in the economic growth and balance of payments strength of the borrowers is an obvious consequence of their past financial commitments. It is probably no exaggeration to state that the continuing ability of the larger Latin American nations, notably Brazil and Mexico, to service their external debt is essential to the solvency of many of the principal members of the international financial community. For this reason, their past borrowing and receptivity to foreign direct investment has given the major Latin American nations a group of allies in their effort to obtain favorable trade policies and expanded credits from the developed world.

The Impact of the "Energy Crisis." Even without the quadrupling of petroleum prices in 1973–74, the economic growth of the major Latin American economies would have been affected by limitations in energy availability. With the exceptions of Latin America's two members of OPEC, Venezuela and Ecuador, and possibly Mexico, which may benefit from recently discovered reserves of petroleum, the radical changes in the world petroleum market have had a severe impact on Latin American economies. In two of the leading petroleum importers, Argentina and Brazil, nationalistic traditions in the petroleum sector have been broken, as the state oil companies have been joined by foreign companies allowed to explore for oil under "risk contracts." Under these arrangements a foreign company finding petroleum in its designated area would share the proceeds with the state company.

On the demand side, the developing automobile industries of Brazil and Argentina have been dealt a severe blow by higher gasoline prices. In addition to rationing, attempts are under way in Brazil to supplement the meager gasoline supply with alcohol produced from Brazilian sugar cane.

Concern for access to energy and raw materials is also creating new subregional dependency relationships. Brazil's drive to increase ties with Paraguay and Bolivia, for instance, is motivated primarily by such considerations. The building of the world's largest hydroelectric dam between Brazil and Paraguay on the Paraná River at Itaipu as a joint venture of these two nations will make Paraguay the world's largest exporter of electricity and contribute substantially to the energy needs of Brazil's Center-South. There can be little doubt that it will make Paraguay's economic system extremely dependent on Brazil, as well as making Paraguayan political stability and cooperation a major national security concern of Brazil. Argentina has also worked out plans with Paraguay to build one or possibly two joint hydroelectric

projects. Similarly, Brazil's large-scale investments in Bolivia are designed to bring that country's abundant natural gas and other raw materials to the industrial center of Brazil.

To assure itself of petroleum supplies, a subsidiary of Brazil's state oil company has made technical assistance and prospecting contracts with Middle Eastern, African, and South American countries. There has been an increase in bilateral trade with socialist countries for the same reason.

Concern with energy has also been a motive for nuclear development in both Brazil and Argentina. American worries that the type of nuclear technology chosen by Brazil could be used for weapons production as well as energy production led to opposition to Brazil's agreement with West Germany, the supplier of the technology, and precipitated one of the most severe crises in US-Brazilian relations in this century.

Policies for Industrial Export Expansion

We have argued that the ISI strategy for the development of the major Latin American economies was both a success and a failure. It did succeed in inducing a substantial degree of industrialization, although this was sometimes accomplished with scant concern for economic efficiency. The ISI policy failed, however, in the sense that it did not reduce external dependency, but only changed its nature. Viewed in retrospect, this outcome was perhaps inevitable, given the lack of certain basic raw materials. Reliance on certain key sectors, however, notably the automobile industry, in the ISI process in Brazil, Argentina, Mexico, and Chile made these countries unnecessarily vulnerable and dependent in a world of high petroleum prices.

This dependency has been heightened by the vertical integration of Latin American industry, especially those enterprises which are subsidiaries of multinationals, into a larger international system. In this sense it is more accurate to speak of "interdependence" rather than dependence, since the degree to which this development can benefit the Latin American economies depends largely on the skills of its policymakers and economic diplomats. Trade diversification, both in the variety of exports and geographically, and diversification of investment sources have expanded the room in which policymakers may maneuver.

The objectives of Latin American trade policies in today's post-ISI era vary with the size of the economy and the degree to which it is industrialized and export-oriented. There is a common concern, however, with the possibility that the markets for their manufactured exports will be limited by what is perceived as increasing protectionism in the developed countries. Brazil has already faced this type of response to its export drive in the United States, where it has been accused of "dumping," or unfairly subsidizing footwear, and in Western Europe, where similar charges have been leveled against its exports of pig iron.

The question of developing country "dumping" in American and European markets is likely to continue to be a major irritant in the relations of Latin America with the United States. Existing international trade agreements, as embodied in the GATT (General Agreement on Tariffs and Trade), leave much room for argument. Strictly and customarily defined as selling the export product below its cost of production, "dumping" by Latin American producers is rare. The fact that a pair of Brazilian shoes may sell for less in Chicago than in São Paulo is due principally to the high internal sales and value added taxes which are not assessed on export sales. The policies which have aroused the ire of US producer groups, in other words, are more the result of tax and subsidy policies designed to stimulate exports than they are the decisions of individual producers to drive out domestic American competition. There is ample precedent in the gradual extension and relaxation of GATT rules to accommodate "border tax adjustments" and other policies used in the European Common Market to offset the price effects of domestic taxes. US critics of the Latin American export policies, however, have argued that these policies go beyond a simple offset.

From an economist's point of view, much of the debate is of questionable value, since it ignores the effects of the adjustments and subsidies, as well as the retaliatory "countervailing duties" which may be imposed by the importing countries, on the consumer. Both critics and proponents of the export incentive policies have concentrated their attention on the effects of these policies on producers. It is clear, however, that the American consumer can benefit from lower prices of imports, and if domestic American workers in the affected industry can obtain more productive employment in other activities. US welfare may actually be raised by Latin American manufactured export incentives. From a national welfare point of view, rather than a producer's perspective, it is the Latin American nations themselves that might benefit most from an examination of the allocative efficiency effects of their export policies.

Primary Commodity Agreements

Accompanying their efforts to enlarge markets for their growing industrial exports, most Latin American nations have attempted to secure and extend the capacity to import generated by their more usual exports of primary commodities. Included in this group of countries are a number of the smaller ones with few prospects for any significant export of industrial products and often highly dependent on one or two primary commodities.

Regional efforts to fashion common policies affecting primary product trade, however, are complicated by many countries' ambivalent roles as both producers and consumers. The Central American countries, for example, have had a common interest with other coffee producers in the International Coffee Agreement, yet as consumers of oil have been severely affected by OPEC, which was founded in part through Venezuelan efforts. Brazil is the dominant force in the world coffee market and the second largest exporter of soybeans, with a vital interest in maintaining high prices for these products. As a net importer of copper, wheat, and several other important

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Latin American primary products, however, it would look with disfavor on cartelization efforts in these areas. For this reason, it is unlikely that any common Latin American policy in primary commodities will emerge, owing to the disparity of national interests. Worldwide associations organized along product lines, however, are attractive in a number of cases: Peru and Chile with Zaire and Zambia in the copper market, or Bolivia and Malaysia in tin.

Prospects for the successful negotiation of commodity agreements are further diminished by ambiguities in the objectives of potential participants. Price "stabilization" is a rallying point for both producers and consumers, an objective endorsed by many European nations and at least paid lip service by the US. Beneath the apparent unanimity, however, is a fundamental divergence. Producers have naturally viewed possible agreements as a means of providing some security against temporary but potentially disastrous declines in price, but they have understandably shown little interest in agreements as a defense against quick price run-ups. The support of consuming nations, however, is contingent on their expectation that commodity agreements will provide some protection against sudden increases in price, which, to the extent that they enter the downwardly rigid general price level in the consuming countries, may tend to "ratchet up" the cost of living.

Although there is some theoretical and empirical support for the argument that reduced price variation about the same average is desirable, this feature of a commodity agreement alone is unlikely to satisfy either producers or consumers. Even if agreement on the objectives of stabilization arrangements were attained, however, a number of problems remain. First, the costs of managing a buffer stock, production quota system, or price support and price limiting system may be considerably greater than potential benefits. Second, temporary success in the short run may lead to long-run imbalances. The International Coffee Agreement created conditions favorable to the entrance of many new producers, resulting in an oversupply which induced Brazil to make unilateral production cutbacks, thus reducing its market share. Finally, the competence and administrative ability of those responsible for a marketing agreement must be considered as well as the political power of participants to deal with nonparticipant attempts to exploit opportunities which the agreement may present.

Is There a Basis for Cooperation?

The emergence of the major Latin American economies from a period of relative economic isolation and their reintegration into the world economy as industrial economies as well as primary producers have profoundly altered their former economic ties to the United States. The increase in diversity of both their exports and the markets in which they are sold as well as the growth of capital inflows from other sources besides the US might be interpreted by some as a decline in the Inter-American System. As should be clear from the first part of this article, however, this fall in the relative importance of Latin America and the US to each other is more apparent than real, because of the rapid and sustained growth of the Western European and Japanese economies in the post-World War II period. Latin America is today more than ever dependent on the growth of the world economy as both a source of essential imports and a market for the region's exports. Latin American stakes in open, internationally efficient world trade have thus brought their national interests closer to those of the US and other major trading and investing countries.

We have identified a number of areas in which contention exists and may grow: the role of multinationals, the effects of export promotion policies, primary commodity agreements, energy policies, and the role of external debt in Latin American development. What is striking, and perhaps encouraging from either a North American or Latin American perspective, however, is the complexity of interests and objectives. Older views of a monolithic America facing a group of weak, dependent economies on the periphery of the world economy are obsolete and misleading. It would today be presumptuous and certainly naive to attempt to identify an American interest in this complexity. The interests of American labor, multinationals, US consumers, or New York banks are separate, and if not in conflict, certainly not identical. In a similar sense, it would be ingenuous to seek a "Latin American" position on many of the issues which dominate economic discussions in the Inter-American Economic System.

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More Inflation, More Uncertainty

In the early spring months it appeared that the economy was snapping back nicely from the effects of the severe winter and the coal strike. The mixed bag of indicators in more recent months has raised caution flags and prompted worried questions. After months, indeed years, of more or less vigorous debate over the relative importance of combating unemployment or inflation, there is a rapidly growing consensus, if not total agreement, that inflation is *the* No. 1 problem of the country.

In part, the consensus rests on a fairly widespread conclusion that the unemployment problem is largely structural and not amenable to solution through manipulation of the overall economy. In greater part, it is a response to a renewed upsurge in prices.

Production Growth Continues

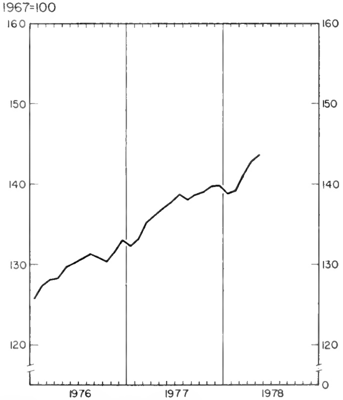
So far, physical output has given no cause for concern. Industrial production in May rose from the previous month at an annual rate of 7.2 percent, about half the rates of March and April (see chart). The slower rate was not unexpected and was even welcomed in some quarters as being more sustainable than the earlier rates, which reflected the rebound from the winter- and strike-induced cuts. The May level of production was 4.9 percent above the year earlier and represented a gain of 14 percent over the prerecession high.

The major industry contributing to the return to more-usual rates of advance was automobiles. Car and truck manufacturers dropped their production 4 percent to a level more in keeping with their sales. After the reduction from the earlier catch-up schedules, automotive output was running at 9.4 million units (annualized rate), still a high level.

A particularly welcome part of the output news was the hefty 7.2 percent rate of growth in business equipment production. Output of intermediate goods rose at a similar rate. Consumption goods were turned out at the same rate as in April, with nondurables up enough to balance the reduction in durables.

Inventories were also up in the latest report, but grew more slowly than sales and were only 1.40 percent of sales. That was the lowest stock/sales ratio reported since the early 1950s. It encouraged a hope that inventory growth can be kept in check so as not to contribute to any potential instability in the economy. Certainly businesses are reported as keeping a very sharp watch on their stocks to prevent, if possible, any unwanted buildup.

Industrial Production



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Homebuilding constitutes a less hopeful part of the output picture. Housing starts dropped 4.9 percent from April to May. Permits issued fell even more sharply, by 8.8 percent, indicating further decreases in starts as the year progresses. The May level of starts stood at 2.1 million units on an annual basis, but the permit level was 1.6 million units. Cutbacks have especially affected multi-unit structures, which are hurt more severely by money market strains than are one-family units.

Employment Also Rises

If the unemployment situation is not improving, it is at least not getting worse. The jobless rate ticked upward in May from 6.0 percent to 6.1 percent of the labor force. The rise was too small to be considered statistically significant.

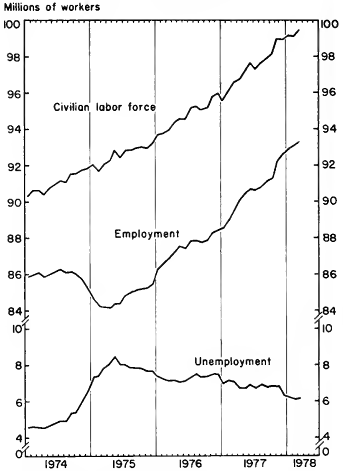
More important was the fact that employment gained by another 311,000 (see chart). As measured by the number of people with jobs, the economy has done very well since the 1974–75 downturn. Since the bottom of that recession, nearly 10 million people have been added to employment rolls. This has carried the total 7.8 million above the prerecession peak. In the past year 3.7 million people have been added. Of these, 600,000 have been drawn from the ranks of the unemployed and 3.1 million have been workers entering or reentering the labor force. The chief difficulty has been that the labor force has grown even more rapidly than have employment opportunities. Thus unemployment, which has declined to roughly 6 million workers, has stuck stubbornly at that level.

Retail Sales Tip Down

After rising sharply at an annual rate of more than 20 percent in March and April, retail sales declined in May at a rate of 2.4 percent. The drop came in durables, especially cars. If cars are excluded, sales in May rose at a rate of 8.4 percent compared with a rate of 13.2 percent the month before.

A longer-term look at retail sales in current dollars would indicate that consumers have been able to maintain purchases. That series shows a growth of 38 percent since the present economic upswing began (see chart).

Employment and Unemployment



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Eliminating price increases (using the commodities part of the CPI) shows, however, a much more modest gain of 17 percent. Price changes alone have accounted for well over half of the "growth" in retail sales.

Consumers have resorted increasingly to credit to support their spending. Installment credit hit $222.7 billion at the end of April, 17.4 percent over the year before. The net additions in March and April were the highest on record and were half again as large as the average monthly advances in 1977.

Whither Prices?

The part of the economic scene that is causing increasing concern is the resumption of sizable advances in prices — prices of goods, prices of services, and prices of money.

The rate of increase in wholesale prices did moderate somewhat in May. The index rose at an annual rate of 8.4 percent, slightly more than half of April's 15.6 percent rate, but still ahead of March's 7.2 percent and the rates of most other recent months (see chart). Since December, the prices of finished goods at the wholesale level have swung upward at a rate of roughly 10 percent, half again as much as in 1977. The increases in prices of crude goods have been even sharper. Much of the run-up has been in foods and feedstuffs, a relatively volatile part of the index. However, prices of finished goods excluding foods, which generally pursue a steadier course, rose at a rate of 9.6 percent last month.

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That figure was not likely to encourage hope for the future of the consumer price index. The CPI for all urban consumers rose at an annual rate of approximately 11 percent in May, somewhat faster than the rates of the early months of 1978. The largest increase was for food and beverages, but housing costs and medical care were also up at a rate of nearly 10 percent.

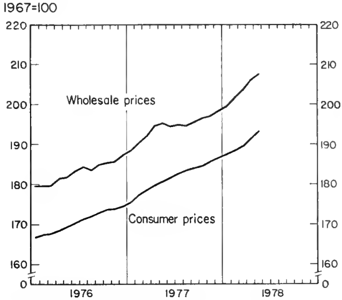
The litany of price hikes has included interest rates — the prices of money — as the Federal Reserve Board has sought to moderate inflationary pressures. By mid-June the prime rate was up to 8.75 percent after the fourth quarter-point hike since the first of the year. That rate was the highest in more than three years. In the past two months the rate on commercial paper has risen 0.8 of a percentage point to 7.63 percent and the federal funds rate has gone up more than 0.6 of a point to 7.49 percent. It is widely expected that these rates will go higher still. The fear is that the Fed will brake too hard, as it has in the past, and help tip the economy into a recession without achieving much in moderating the underlying inflation rate.

The Worries

It has almost seemed as if we were learning to live, however painfully, with 6 percent inflation. The new outbreak of "double digit-itis" since the first of the year has sent storm signals up everywhere.

The psychology that prompts consumers to "buy before prices go up" adds to inflationary pressures now and "borrows" sales from later periods, contributing to the potential for a later downturn. Another way of putting it is that outstanding installment debt in April was equivalent to almost one-fourth of the wage and salary component of personal income, a new peak representing a very heavy mortgage on future income. Analysts are increasingly concerned about how much longer consumers in the aggregate can continue to buy and run up debt to do it. Many consumers individually are asking the same question.

Wholesale and Consumer Prices



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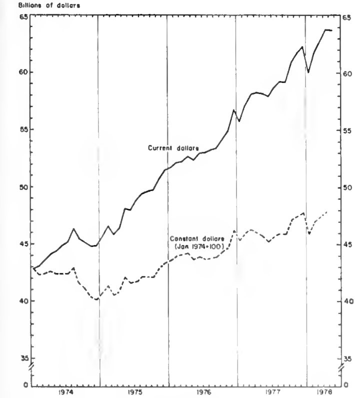
Retail Sales



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Business is in no better situation than consumers. One measure closely watched is expected capital expenditures. The latest report indicates that current plans call for capital spending to rise 11.2 percent in 1978 over 1977's level. The increase from 1976 to 1977 was 12.7 percent. In real terms spending was up 7 percent in 1977; in 1978 it is expected to be, at best, slightly under 6 percent. Taking into account the recent surge in prices, the real 1978 gain may be as low as 4 percent. Either figure would be too low to form a base for further economic growth.

Business wants to catch up on profit margins. Labor wants to catch up on wages (and 1979 will be a heavy bargaining year, involving some large and important unions). Consumers feel as if they have the short end of the stick, with little or no defense against rising prices. Everyone would like to be at the head of the catch-up line; no one wants to be at the head of the hold-the-line line.

The Carter Administration has started to use the jawbone against price increases. However, since the continuation of large government deficits is widely blamed as a basic cause of the persistent inflation, something more than talk on the part of the Administration will be required.

RUTH A. BIRDZELL

Local Illinois Developments

Autumn 1977 Family Budgets

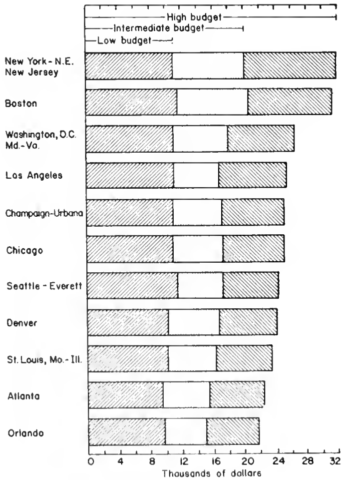
According to the US Bureau of Labor Statistics, it costs more to eat in New York City and northeastern New Jersey ($387 per month for an intermediate budget for a family of four) than anywhere else in the country, excluding Honolulu and Anchorage. Austin, Texas, and Green Bay, Wisconsin, where families spend approximately $305 per month at the intermediate budget level, compete for the lowest urban family food budget. (A family is defined by the BLS to include a 38-year-old male, a nonworking spouse, and two children aged 8 and 13.) These findings represent updated estimates for three hypothetical annual total family budgets for the 1976–77 fiscal year, based on hypothetical lists of goods and services specified in the mid-1960s to portray three relative standards of living.

Illinois Business Indexes

Item	Apr. 1978 (1967 =100)	Percentage change from Mar. 1978	Percentage change from Apr. 1977
Employment-manufacturing[1]	88.9	- 0.0	- 0.1
Weekly earnings-manufacturing[1]	213.9	+ 1.8	+ 7.4
Consumer prices in Chicago[2]	191.5	+ 0.9	+ 6.6
Life insurance sales (ordinary)[3]	267.1	- 10.2	+ 8.8
Retail sales[4]	223.6[a]	+ 2.1	+ 3.9
Farm prices[5]	218.0	+ 3.8	+ 7.3
Building permits-residential[4]	108.7	+ 20.0	-31.3
Coal production[6]	95.9	+1,099.3	- 3.3
Petroleum production[7]	38.9	+ 2.6	- 7.1

[1]Ill. Dept. of Labor. [2]US Bureau of Labor Statistics. [3]Life Ins. Agcy. Manag. Assn. [4]US Dept. of Commerce. [5]Ill. Crop Rpts. [6]Ill. Dept. of Mines. [7]Ill. Geol. Survey.
[a]Preliminary.

Estimated Annual Budgets, Urban Family of Four, Three Levels, Autumn 1977



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The indexes derived by the BLS are used to compare budgets in selected urban areas. They are designed to reflect differing price levels, consumption patterns, climates, types of transportation facilities, and taxes among different geographic regions. For example, Chicago family budgets were higher than the US average at the lower and intermediate levels, 1.4 and 1 percent respectively. Champaign-Urbana budgets were also above the US average for these budget categories. St. Louis family budgets, on the other hand, were below the national average for each category during the period.

For each of the three budget levels nationally, increases in 1976–77 were somewhat smaller than those for the previous year. The intermediate and higher budgets cost 5.4 percent and 6.1 percent more than the year before; the cost of the lower budget rose by 4.4 percent. Except for housing, consumption costs rose at about the same rate at each level. Homeowner costs (included only in the intermediate and higher budgets) rose less than rental costs (lower budget); but the total budget at the lower level benefited more from changes in personal tax laws than did the other two levels.

Higher food prices were reflected in a 6.2 percent increase in the cost of food in each of the total family consumption budgets. The cost of medical care, however, rose by 9.4 percent, an increase rivaled only by a 9.1 percent increase in personal income taxes at the higher budget level.

For more information, consult *Autumn 1977 Urban Family Budgets and Comparative Indexes for Selected Urban Areas* (US Department of Labor, North Central Region, 230 South Dearborn, Chicago, Illinois 60604).

The Changing Structure of Food Marketing

Eating out now commands approximately one-third of the American family's food dollar. That compares with one-fourth of food spending only a decade ago. There is some evidence that grocery stores are beginning to feel the effect of these changing habits. In learning to cope, stores have been desperately experimenting with new marketing techniques in order to maintain their competitive positions. These changing conditions have forced stores to rely on the addition of nonfood lines to bolster profits, to intensify promotions, and to introduce automated checkout systems to increase productivity. Among the latest ideas is the introduction of generic foods — goods sold without brand names and at lower prices.

Postwar Growth

The major postwar developments in food retailing and wholesaling have included massive shifts from counter service to more efficient self-service retailing, increasing numbers of large "supermarkets" but disappearance of thousands of small family-owned "Mom and Pop" stores, and spectacular growth of large corporate food chains, voluntary chains, and retailer cooperatives. These developments can be attributed in particular to a growing urban population — due in part to the expanded reliance on the automobile — and growing incomes.

The higher level of incomes attributable to postwar economic growth has enabled consumers to buy higher quality and more expensive kinds of food, to demand greater variety, to experiment with new products, and to enjoy the luxury of laborsaving conveniences provided by processed foods and efficient shopping facilities. Likewise, the desire for convenience has been increased by the growing number of gainfully employed women.

The figures for Illinois clearly reflect these trends. Between 1951 and 1975 the number of grocery stores dropped from 7,627 to 4,063. In that same time period, however, employment increased by 52 percent — from approximately 52,300 to 79,500 persons. Thus the typical store has grown in size. For example, in 1951 about 71 percent of the stores employed 1 to 3 persons. Most of them were family-operated stores. In 1975 only about 39 percent of the stores employed 1 to 4 persons.

The basic economic structure of the Illinois grocery industry can be classified according to types of stores. A chain is usually referred to as a company which operates four or more stores. The major chain operators in the State include Jewel Food, Fisher Foods, A & P, Kroger, and National. The other major class of stores is made up of the independents — firms which operate from one to three stores. These independent stores are further classified according to their relationships with food wholesalers: unaffiliated independents buy from wholesalers or suppliers on an independent basis; cooperatives are independent grocers who jointly own and operate their own wholesale organization: and "voluntary" groups are independent grocers who are jointly sponsored by an independent wholesaler. Voluntary and/or cooperative groups include such stores as IGA, Certified Grocers of Illinois, Central Grocers, and Grocerland.

About 70 percent of the state's grocery stores are located in Cook County. The largest operating chain in the Chicago area is Jewel Companies, whose stores account for approximately 46 percent of supermarket sales there. The company's largest food division, Jewel Food Stores, operates 174 stores in the Chicago area. Another division, Eisner Food and Agency Stores, operates 32 stores in the Midwest. Jewel's other important divisions include Osco Drug, Incorporated (about 40 percent of the company's food stores are combined with or alongside an Osco drugstore), Star Market Company, Buttrey Food Stores, and White Hen Pantry stores. Fisher Foods (which owns Dominick's Finer Foods and which runs 67 stores in the Chicago area) and A & P (whose Chicago division runs 135 stores) are other major chains operating in Chicago. National Tea was the largest food retailer in Chicago only two decades ago, but by 1976 it had fallen to third place with about 13 percent of the market. Financial troubles forced the closing of all of its 159 Chicago stores in that same year.

Aggressive Independents

Only a decade ago the Commerce Department concluded that large supermarket food chains would be selling close to 75 percent of the foods sold in the country by 1980; at that time they accounted for less than 50 percent of food sold. But for several years now the number of chain stores has declined while the number of independents has risen, and the two have been splitting the country's food business down the middle. Independents, who frequently purchase troubled chain stores, have been able to run on lower margins than the typical larger new chain supermarkets. Smaller stores and lower energy costs, less unionization, and the ability to adjust quickly to local market conditions have been critical factors working in the independents' favor.

An interesting development in the past several years has been the growth of so-called "convenience stores" — small self-service outlets providing extended hours in convenient locations with parking facilities. These stores, in return for prompt service and extended hours, are able to command higher selling prices and higher returns on sales than those recorded by major supermarket chains. Industry forecasters say convenience stores will outnumber supermarkets within the next few years. Currently they account for about 5 percent of all food store sales.

Another innovation, the introduction of cost-saving computer checkout systems, has progressed much more slowly than analysts expected; at present only about 300 supermarkets use them. A local ordinance in Chicago which requires unit prices to be stamped on food products has slowed the introduction of computerized systems in that market.

MICHAEL TREBING

Comparative Economic Data for Selected Illinois Cities, April 1978

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS	$119,902[a]	3,193.3[a]	$43,676[a]	4,977.0	5.9
Percentage change from Mar. 1978	*+118.3*	*-11.5*	*-5.3*		
Percentage change from Apr. 1977	*+42.5*	*+0.9*	*-0.1*		
NORTHERN ILLINOIS					
Chicago	$ 69,318	1,592.9	$33,788	3,138.7[b]	5.3[b]
Percentage change from Mar. 1978	*+243.9*	*-12.2*	*-6.0*		
Percentage change from Apr. 1977	*+140.4*	*+0.9*	*-0.8*		
Aurora	$ 3,847	126.9	$ 491	36.8	5.5
Percentage change from Mar. 1978	*+77.1*	*-14.5*	*-8.9*		
Percentage change from Apr. 1977	*+142.5*	*+2.5*	*+19.1*		
Elgin	$ 948	79.1	$ 522	26.8	6.2
Percentage change from Mar. 1978	*-51.2*	*-15.7*	*-15.6*		
Percentage change from Apr. 1977	*-3.1*	*+2.0*	*+14.9*		
Joliet	$ 3,756	351.1	$ 313	44.9	5.7
Percentage change from Mar. 1978	*+112.4*	*-14.0*	*+0.9*		
Percentage change from Apr. 1977	*-68.6*	*-3.9*	*+3.9*		
Kankakee	$ 721	66.5[c]	$ 232	13.7	6.4
Percentage change from Mar. 1978	*+658.9*	*-14.9*	*+26.0*		
Percentage change from Apr. 1977	*+29.9*	*+4.2*	*+9.9*		
Rock Island-Moline	$ 3,017	108.1[d]	$ 1,067	102.5[b]	5.0[b]
Percentage change from Mar. 1978	*-51.1*	*-6.8*	*-7.2*		
Percentage change from Apr. 1977	*-18.4*	*-1.0*	*-0.8*		
Rockford	$ 5,697	145.7	$ 803	68.7	5.2
Percentage change from Mar. 1978	*+78.9*	*-10.5*	*-12.2*		
Percentage change from Apr. 1977	*-7.8*	*+2.8*	*-0.7*		
CENTRAL ILLINOIS					
Bloomington-Normal	$ 8,486	41.5	$ 903	58.8[b]	4.3[b]
Percentage change from Mar. 1978	*+128.9*	*-5.2*	*+8.4*		
Percentage change from Apr. 1977	*+53.4*	*-3.0*	*+13.4*		
Champaign-Urbana	$ 1,201	43.4	$ 652	71.9[b]	4.4[b]
Percentage change from Mar. 1978	*-20.8*	*-9.5*	*-0.9*		
Percentage change from Apr. 1977	*-38.0*	*-4.4*	*-3.6*		
Danville	$ 1,366	43.0	$ 209	18.9	7.6
Percentage change from Mar. 1978	*+123.2*	*-9.2*	*+3.4*		
Percentage change from Apr. 1977	*+69.6*	*+10.8*	*-39.0*		
Decatur	$ 4,132	109.9	$ 429	56.4[b]	6.2[b]
Percentage change from Mar. 1978	*+43.9*	*-4.2*	*-5.2*		
Percentage change from Apr. 1977	*+7.0*	*+9.2*	*+0.2*		
Galesburg	$ 1,277	29.5[c]	$ 147	16.3	5.9
Percentage change from Mar. 1978	*+43.3*	*-7.8*	*+2.0*		
Percentage change from Apr. 1977	*-31.7*	*+3.8*	*+2.0*		
Peoria	$ 8,675	182.5	$ 1,249	59.7	5.5
Percentage change from Mar. 1978	*+159.3*	*-6.6*	*-1.7*		
Percentage change from Apr. 1977	*+54.8*	*+5.8*	*-2.8*		
Quincy	$ 410	38.4	$ 192	20.7	6.1
Percentage change from Mar. 1978	*-37.3*	*-4.7*	*-3.0*		
Percentage change from Apr. 1977	*-69.4*	*+3.7*	*-1.5*		
Springfield	$ 3,841	89.3	$ 1,668	90.9[b]	5.3[b]
Percentage change from Mar. 1978	*-2.9*	*-15.0*	*-1.0*		
Percentage change from Apr. 1977	*-51.0*	*-3.1*	*-4.6*		
SOUTHERN ILLINOIS					
East St. Louis	$ 95	24.5	$ 162	21.8	9.5
Percentage change from Mar. 1978	*-76.1*	*-9.9*	*-2.4*		
Percentage change from Apr. 1977	*-5.0*	*+6.5*	*+0.6*		
Alton	$ 152	70.5	$ 126	14.7	6.5
Percentage change from Mar. 1978	*-70.1*	*-7.1*	*+5.0*		
Percentage change from Apr. 1977	*-9.5*	*-7.7*	*+13.5*		
Belleville	$ 2,501	21.5	$ 438	19.0	4.0
Percentage change from Mar. 1978	*+290.7*	*-16.9*	*+6.3*		
Percentage change from Apr. 1977	*+205.7*	*+13.1*	*+64.6*		
Carbondale-Murphysboro	$ 462	28.5	$ 285	n.a.	n.a.
Percentage change from Mar. 1978	*+44.3*	*-12.0*	*-6.2*		
Percentage change from Apr. 1977	*+4.2*	*+2.5*	*+17.2*		

[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local post office reports; accounting period ending 21 April 1978. [4]Illinois Department of Labor; preliminary data.

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory.

[d]Includes East Moline. n.a. Not available.

What Tennessee and Massachusetts Have Done to Guarantee Employee Pensions

ROLAND W. BARTLETT

Upon retirement most workers in the United States receive a pension, social security, or both. For most of them the monthly check or checks become their principal source of income after they retire. Many workers have contributed to their retirement income during their entire working careers. Hence, it is of vital importance when they retire that funds be available to pay the pensions earned during their active careers.

Pensions to government workers may be paid from money paid into the pension fund by workers and the government plus interest, from current taxes, or some combination of these sources.

Evidence is now available which shows that many state and local governments are failing to meet their funded public worker pension liabilities. Unfunded pension liabilities for specific states in 1977 are given in the following tabulation. (Data for states except Tennessee were reported by Mr. Carmen W. Elio, chairman of the Massachusetts Retirement Commission and published in the Champaign-Urbana *Courier,* 21 September 1977. The Tennessee data were reported from Mr. John Bragg's office in the Tennessee legislature on 12 May 1978.)

	Billions	*Per person*
California	\$13.6	\$ 660
Massachusetts	7.6	1,306
Illinois	5.7	507
New Jersey	5.3	720
Ohio	3.5	326
Florida	2.8	365
Tennessee (1975)	0.8	202

With about 40 percent of the national income now being paid in taxes, it is utterly unrealistic to expect state legislators to increase taxes sufficiently to liquidate unfunded pension liabilities quickly. On the other hand, public employees want some assurance that funds will be available to pay them their expected pensions after they retire. Recent actions in Tennessee and Massachusetts to put pension funding on a sound basis may serve as guidelines for other states which have large unfunded pension liabilities.

In reviewing these facts one notes that on a per capita basis, Massachusetts' pension fund liability was over six times that of Tennessee. It makes sense for states other than Tennessee and Massachusetts to finance their pension fund liabilities adequately before being threatened with bankruptcy, or before doing this makes it necessary to take an unduly high proportion of state revenues to amortize this liability. Officials of Boston and other hard-pressed localities worry whether they can afford their massive annual payments to the pension system in their state.

Dr. Roland W. Bartlett is professor of agricultural economics emeritus, UIUC. His major academic career has been in teaching, research, and extension in dairy marketing, but his interests have also extended to labor problems and foreign trade policies. He has served as consultant to the US Departments of Justice and Agriculture, the government of British Columbia, and Washington State University. He is the author of the recently published *American Foreign Policy in Perspective.*

The Tennessee 40-Year Plan

John Bragg, assemblyman in the Tennessee state legislature and chairman of the National Conference of State Legislatures, has taken the lead in putting the Tennessee pension system on a sound basis. When Mr. Bragg started his broadscale reform in 1975, Tennessee had an unfunded pension liability of \$800 million or \$202 per person. Under his leadership in 1975, the Tennessee legislature initiated a 40-year plan to liquidate the unfunded pension liability and to build up a fund to guarantee enough money to pay current and future pensions when due.

Assuming successive legislators and governors in Tennessee fulfill the provisions of the 1975 reform law, two things will have happened. First, at the end of 40 years the unfunded liability will have been reduced to zero; and second, the pension fund will have been built up on the basis of actuarial studies so that a new worker would get a pension based exclusively on the money he paid into the fund plus the government's matching contribution to the fund.

Let us see how the Tennessee plan operates. In 1977, Tennessee paid \$110 million and employees paid \$51 million into the pension fund, making a total of \$161 million. In 1977, \$78 million was paid in pensions, thus leaving \$83 million to reduce its pension fund liability. Tennessee employees pay 5 percent of their salaries into the pension fund. Matching funds paid by Tennessee vary. For teachers, Tennessee pays 14.9 percent of teachers' salaries into the teachers' pension fund; for employees other than teachers, the state payment is 7.11 percent.

In 1977, the pension fund in Tennessee totaled about $1 billion. During the next 40 years, this fund will gradually increase and its pension fund liability will gradually decrease. Tennessee has demonstrated in a practical way how a state can restore the paying of pensions on a sound actuarial basis. Sixty-eight percent of pension funds in Tennessee are invested in bonds, 31 percent in common stocks, and 1 percent in mortgages.

In 1974, the Tennessee legislature initiated a cost-of-living increase of 1.5 percent of salaries and wages paid. This was increased to 3 percent in 1975. If the consumer price index (CPI) increased less than 3 percent in any year, the cost-of-living increase would be reduced to the actual increase in the CPI index.

When Tennessee was asked to institute a 3 percent annual cost-of-living allowance for its pensions, advocates said it would cost less than $500,000 a year. Bragg's committee found that this allowance would escalate to $100 million a year by the year 2000. They insisted that this allowance be funded immediately at an actuarially computed level of $20 million annually. When any new benefit is added this will be funded immediately on an actuarial basis in the same way the cost-of-living allowance has been funded. Tennessee will contribute $33 million toward funding the cost-of-living provision during 1978–79.

In 1976, the Tennessee Supreme Court said that if paying full pensions ever threatened the state's fiscal stability, the state might renege on its commitments. By stopping the ever-increasing pension fund liability and steadily increasing its pension fund on an actuarial basis, Tennessee has materially improved the chances of fulfilling its pension obligations both currently and in the future.

As chairman of the National Conference of the State Legislatures' task force, Mr. Bragg has listed several steps any state legislature can undertake to pull its state and local pension plans out of the depths of poor management, poor funding, and political expediency.

(1) *"Appoint a committee or council made up of hard-headed thick-skinned legislators who are willing to work and learn about pensions, and get some control of these programs."* Every proposed pension change would then run the gantlet of the committee so that it could be exposed to full actuarial analysis and the true costs revealed.

(2) *"Eliminate pension hopping."* Under this loophole, an employee may work years as a ditchdigger, then get appointed to a higher-paying job just before he retires and get all his years at ditchdigging credited at the high salary to give him an inflated pension benefit. The most notorious example is New York's practice of using only an employee's last year of work — including overtime — to determine his pension base.

(3) *"Eliminate double-dipping."* The most notorious examples are federal laws which permit a person receiving a full military pension to go back to work for the federal government and then draw a full civilian salary at the same time. There are currently 150,000 double-dippers on federal payrolls drawing $1 billion annually in pensions plus current salaries.

(4) *"Require examination of disabled government workers every five years by two physicians."* A favorite gambit of government administrators who want to reduce work forces or to get rid of an employee that they do not like is to discover that he or she has some kind of disability and must be pensioned immediately. While drawing government pensions, "disabled" workers often go off and get other jobs so that society pays for them twice.

(5) *"Insist on front-end funding."* This means that when any new benefit is added, it is funded immediately on an actuarial basis. As stated, when Tennessee was asked to institute a 3 percent annual cost-of-living allowance on its pensions, advocates said it would cost less than $500,000. But Bragg's committee insisted it be funded immediately at an actuarially computed amount of $20 million annually.

The Massachusetts 40-Year Plan

In 1977, Massachusetts had an unfunded pension liability of $7.6 billion or an average of $1,306 per person for everyone in the state. For over 30 years many state employees have paid part of their salaries or wages into the pension funds while year-by-year the state and local governments have failed to come through with their full share of such funds. In 1975, pensions in Massachusetts were paid from employee contributions of 7 percent of their salaries and wages, plus current taxes under what is known as the pay-as-you-go plan. Carmen W. Elio, chairman of the Massachusetts Retirement Law Commission, has warned that if pension plans are not properly financed, bankruptcy will be the inevitable result.

In this situation, Mr. Elio proposed a reform plan

Projected Annual Employer Contributions for All 102 Contributing Retirement Systems in Massachusetts, with 4.5 Percent Inflation

Fiscal year ending 30 June	Annual employer contributions (percent of payrolls)		Ending balance[a] Funding plan (Assets in millions)
	Funding plan	Pay-as-you-go plan	
1978	13.5	12.1	$ 58
1979	15.4	12.9	165
1980	18.3	13.8	372
1981	22.2	14.8	742
1982	27.2	15.8	1,346
1983	27.2	16.9	1,964
1984	27.2	18.0	2,591
1985	27.2	19.2	3,222
1986	27.2	20.5	3,849
1987	27.2	21.8	4,462
1988	27.2	23.2	5,048
1989	27.2	24.7	5,590
1990	27.2	26.4	6,066
1991	27.2	28.1	6,458
1992	27.2	30.0	6,736
1993	27.2	31.9	6,862

Source: *Report of the Funding Advisory Committee and the Retirement Law Commission to the Governor and the General Court of Massachusetts* (October 1976), p. 9.

[a]The pay-as-you-go plan would have no assets exclusive of accumulated employee contributions.

which would put the 102 pension plans of the state and local governments in Massachusetts on a sound basis. The principal features of the reform plan are as follows:

(1) Continuation of the 7 percent deduction of employee payrolls;

(2) After a 5-year phase-in period under the reform plan, state and local governments in Massachusetts would each pay 27.2 percent of their payrolls into the pension funds for the next 40 years. The governments' payments of 27.2 percent would provide for

(a) Full funding of pensions for all new employees;

(b) An average annual increase of 4.5 percent for inflation during the 40-year period;

(c) A gradual decrease in the unfunded pension liability so that it would be zero at the end of the 40-year period;

(d) A continuation of the pay-as-you-go plan during the 40-year period to pay the difference between total pension and that received from the pension fund. At the end of the 40-year period each worker would get a pension based exclusively on the money he paid into the fund plus the matching contribution of the state or local governments to the pension fund.

Studies by the Massachusetts Law Commission showed that after a period of years annual costs for pensions would be greater under the pay-as-you-go plan than under the reform plan. Thus, as shown in the accompanying table, the pay-as-you-go plan in 1991 would take 28.1 percent of payrolls as compared with 27.2 percent by the reform plan. By 1993, pay-as-you-go would increase to 31.9 percent but the payments to the funding plan would remain at 27.2 percent. Between 1993 and 2016, the pay-as-you-go plan each year would require a higher percentage of payrolls but the rate under the reform plan would remain the same.

Under the reform plan, the assets of the pension fund exclusive of employee contributions would steadily increase, going from $58 million in 1978 to $6.9 billion in 1993. Continuation of the pay-as-you-go plan would simply add the $6.9 billion to the unfunded liability and to the insecurity of the whole pension system.

Oil Multinationals and the National Interest

FRED GOTTHEIL

There are numerous important oil-related issues concerning US-Middle East economic relations. However, this article concentrates on but one aspect of the "oil problem," the relationship between the US-based oil multinationals operating in the Middle East and US national policy in that region. I argue that on questions of oil price determination and balance of payments, the dominant role played by the multinationals has compromised the national interest.

Oil Prices

Perhaps because of oil's prominence in this country's economy, it is important to note at the outset the critical distinction between the *nation's* interest in the Middle East and the interest of US-based *multinational* oil corporations. Traditionally, among public policy decision-makers, private oil interests and national interests were assumed to converge. In fact, for a long time, government policy has been formulated on the basis of such a convergence. Federal legislation on oil imports, prices, production controls, investments, and taxes has been designed in concert with the oil multinationals. The multinationals have structured the rules and regulations by which they and we have lived. I do not suggest that there was a conspiracy. Rather, the private interests of Exxon, Mobil, Texaco, Gulf, and Socal have been openly regarded by those in Washington as properly representing the nation's long-run interest.

Even so, the identification of public with private interest has not gone unchallenged. Almost every textbook on economics has demonstrated — in the most eloquent prose, geometry, and mathematics — that monopoly distorts rather than promotes the public good. In the pursuit of private interest, that is, the maximization of profit, monopolies produce less than would be produced under competitive conditions. Monopolies are able to charge higher prices and absorb considerable unused capacity. A classic example of monopoly abuse cited in these textbooks was the oil industry.

In short, students of economics knew that as early as 1900, trustbusting President Theodore Roosevelt defended the national interest against the unfettered operations of Standard Oil. The Sherman Antitrust Act was enacted 10 years earlier with Standard in mind. But they

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learned as well that this and subsequent legislation to curb the power of the oil monopolies were, at best, symbolic. In the political and corporate arenas, that is, among "practical men," what was good for private oil was thought to be good for the nation. In view of this, it would seem reasonable to assert that a primary economic interest to millions of US consumers and producers would be to secure a steady, reliable supply of inexpensive oil. The less expensive the oil, the higher is the real income of US consumers.

Did US consumers and producers secure inexpensive oil? The price of Persian Gulf crude oil on 1 January 1973 was $2.59 a barrel. At that time, few consumers or producers considered $2.59 to be inexpensive. On the contrary, $2.59 seemed outrageously high relative to the known production costs of Middle East oil. Persian Gulf crude cost 10 cents a barrel to produce, and no matter how one views the relationship between costs and price, this differential was substantial.

The price-cost differential emerged because the price of oil has little to do with costs. Rather than reflecting forces of supply and demand, the $2.59 price was an arbitrary one which reflected the political clout of domestic oil producers and politicians. US consumers paid $2.59 regardless of the quantities of oil available and regardless of actual costs of production. Whether production costs of Middle East oil were 10 cents or 50 cents or $2.00 a barrel had no bearing whatever on what consumers paid. However, production costs do affect the profit margins of the multinationals. The price-cost spread of the Middle East oil afforded cheap oil for the oil multinationals, but not for the US consumer.

Moreover, given this politically engineered price-cost spread, it would have been irrational for the oil multinationals to look elsewhere for new oil. This is not to say that other sources would have been difficult to locate. Non-Middle East "cheap" oil was indeed available to the multinationals. The Middle East was the most advantageous location for the multinationals simply because it provided them with the cheapest oil.

As a result, over the course of years, the multinationals produced a system of oil production and distribution that virtually locked the Western world into the Middle East. What appeared as rational strategy for the multinationals, however, produced little benefit to the US consumer. That is, with posted prices totally unrelated to actual production costs, US consumers were deprived of inexpensive oil. So far as national policy legitimized this strategy, we see the confusion of private multinational interest and national interest.

The sequence of events that followed October 1973 did not introduce a fundamental structural change in the determination of oil prices. To the contrary, price increases were simply passed forward within the existing structure. By 1 January 1974, the posted price of Persian Gulf crude was $11.65. This increase reflected a political rather than an economic change in the industry. There continues to be abundant, low-cost oil, but there has been a dramatic shift in political power within the industry. The decision-making powers of the multinationals and OPEC were reversed. Whereas before 1973, the multinationals dictated price and output policy while OPEC acquiesced, since 1973, OPEC has assumed the dominant role. Prior to 1973 the $2.59 posted price was already abnormally high from a cost of production position. The new $11.65 OPEC-determined price merely serves to indicate how far off the mark the earlier price had been in terms of obtaining maximum monopoly profits.

Nevertheless, it is to the advantage of the multinationals to stay in the Middle East. The US-based oil multinationals will center their activities in the Middle East as long as its price-cost spread remains greater than the spread of any other oil — whatever the level of posted prices. In other words, there is no more reason to expect them to look elsewhere for oil now than there was prior to 1973.

Not only are the multinationals out of step with US national interest, but they are very much in step, as they have always been, with the interests of the OPEC nations. Because oil companies are integrated from the wellhead to the consumer, they serve as the mechanism by which producer countries have augmented their revenues.

That the multinationals have been well served by this "marriage of convenience" is clear from Table 1. The victim, of course, was the US consumer.

Table 1. Net Corporate Income of the Five US-Based Oil Multinationals

	Oct. 1971–Sept. 1972	Oct. 1972–Sept. 1973	Oct. 1973–Sept. 1974
Total, millions of dollars after tax	3,888	5,397.4	8,422.3
Percent change from previous year	—	+39	+56

Source: US Senate, *Multinational Oil Corporations and U.S. Foreign Policy* (2 January 1975) p. 157.

US Balance of Payments

In yet another way, the private interests of the US-based oil multinationals are thought to be inexorably tied to the national interest. The link here is the US balance of payments. The oil multinationals, it is argued, play a considerable role in providing the US with substantial balance of payments income. This income is brought to the US from the Middle East in the form of dividends, interest, and branch earnings. A cursory glance at Tables 2 and 3 shows that these earnings are by no means marginal.

Although less than 3 percent of total US private overseas investment (Table 2, line 4) and less than 11 percent of total oil investment (Table 2, line 5) is located in the Middle East, approximately 20 percent of the total US balance of payments income (Table 3, line 4) is derived from the region. This geographical disproportionality between investment and income shares has been interpreted by many government and business people as a national asset whose preservation has become national policy.

Looking strictly at this balance of payments income, the Middle East appears as the proverbial goose that lays

Table 2. US Direct Investment Abroad

	1971	1973	1974	1975
	Amount (millions of dollars)			
Total	86,001	103,675	118,613	133,168
Total in oil	24,258	27,313	30,248	34,806
Total in Middle East oil	1,465	2,130	1,618	3,673
	Percentage			
Middle East oil/Total	1.7	2.1	1.4	2.8
Middle East oil/Total oil	6.0	7.8	5.3	10.6

Source: US Department of Commerce, *Survey of Current Business*.

the golden eggs; but whose goose and whose eggs? Once more, the extreme concentration of economic and political power within the oil industry comes to bear on the issue of national interest. The identification of the Middle East derived balance of payments income with national interest ignores the question of how the income is distributed within the US economy.

The non-Middle East balance of payments income that is brought back to the US is generally spread across the many sectors of the US economy, among a variety of industries, and among a wide set of firms within the industries. In such a form, this non-Middle East income, whose value depends upon the general state of international commerce, can be regarded simply as an addition to the US income stream.

The Middle East oil component of the US balance of payments income, on the other hand, takes on a qualitatively different character. Because of its relatively large share in the total balance of payments income and because of its highly concentrated and multinational structure, it assumes a political dimension.

The oil multinationals appear more similar to a government with interests distinguishable from those of the US than to a US-based set of corporate enterprises. They transfer dividends, interest, and branch earnings to the US only if economic conditions are favorable to their own interests. Otherwise, they can, with ease, divert these income flows to other areas. That is to say, like a government, they can form or break alliances in the service of their own interests. In a real sense, because of their size, they make difficult US control over its own international commerce. Given this power, the oil multinationals negotiate on equal terms with the US in an attempt to modify US policy so that it may reflect more directly their interests and those of their Middle East allies. In this respect, the income accruing to the US-based oil multinationals from the Middle East, while appearing in US accounts as contributions to balance of payments income, satisfies the national interest no more than if this were held by non-US-based enterprises.

Table 3. US Balance of Payments Income

	1971	1973	1974	1975
	Amount (millions of dollars)			
Total, all inclusive	7,295	8,841	17,678	9,456
Total, oil	3,442	4,249	11,699	3,657
Middle East oil	1,879	2,065	8,434	2,336
	Percentage			
Middle East oil/Total	25.8	23.4	47.7	24.7
Middle East oil/Oil	54.6	48.6	72.1	63.9

Source: US Department of Commerce, *Survey of Current Business*.

A more complete assessment of the relationship between Middle East oil and the US balance of payments includes not only balance of payments income, but also US expenditures on oil imports from the Middle East. Viewed in this broader perspective, the goose that was thought to lay golden eggs for the US appears now to be a goose that itself consumes the eggs and more.

Table 4 illustrates the point. In 1971, US imports of Middle East oil amounted to $274.5 million, or 14.6 percent of Middle East oil balance of payments income. By 1974, the inport cost of Middle East oil rose to $4,043.8 million, absorbing 48 percent of the $8,434 million Middle East oil balance of payments income. Still, a net surplus remained.

Table 4. US Imports and Balance of Payments Income from the Middle East

	1971	1973	1974	1975
	Amount (millions of dollars)			
Total imports (1)	574.0	1,344.6	4,665.1	5,400.6
Oil imports (2)	274.5	846.9	4,043.8	4,653.7
B-of-P income from oil (3)	1,879.0	2,065.0	8,434.0	2,336.0
Line (3) - Line (2)	+1,604.5	+1,218.1	+4,390.2	-2,317.7
	Percentage			
Oil imports/Total imports	47.8	63.0	86.7	86.2
Oil imports/Oil income	14.6	41.0	47.9	199.2

Sources: US Department of Commerce, *Survey of Current Business* and *U S. General Imports: World Area by Commodity*.

However, the 1974 income was abnormally high even for the multinationals. It represented a substantial windfall from sales of pre-October 1973 purchased oil at post-October 1973 prices. By 1975, this source of windfall disappeared. Whereas the 1975 balance of payments income derived from Middle East oil was $2,336 million, the 1975 oil bill was $4,653.7 million, or 199.2 percent of the balance of payments income. That is to say, the US balance of payments account with Middle East oil in 1975 became deficit-generating.

In sum, the US national interest, vis-à-vis the US-based oil multinationals and the oil-producing countries in the Middle East, has been increasingly compromised on two counts: first, a growing share of the domestic US income stream has been shifted during the 1970s to the oil multinationals, strengthening their influence over domestic as well as foreign economic activity; and second, the millions of US consumers and producers have been directly burdened with the costs of paying, through higher oil prices, for both the multinationals' and the oil-producing Middle East countries' windfalls.

This rather unattractive US-Middle East oil relationship is cumulative. Our growing dependence on Middle East oil, fostered principally by the economic and political power of the multinationals in the US, provides the latter with a more substantial source of economic and political power with which to maintain this Middle East connection.

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An Economy with Problems

The economy is riding the crest of one of the longest peacetime expansions on record. Even so, it is interesting to note that this period of growth has failed to be accompanied by a widespread feeling of "prosperity."

Public attention has been distracted by problems. In terms of their generally visible impact the most serious problems facing the nation are rapid inflation and high unemployment. A troubling irritant to the public is the persistence of large foreign trade deficits coupled with "creeping" devaluation. To many the chief culprit is the federal government — for running continuing huge deficits. However, central to these problems of most apparent concern is the economy's failure to accelerate — or even maintain — its rate of productivity gains.

Economic Expansion

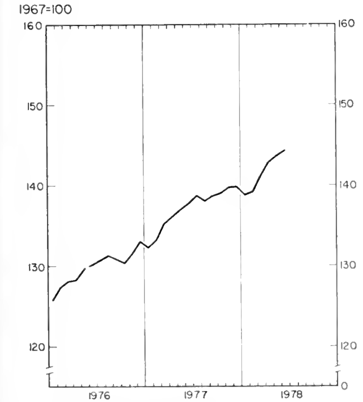
Real output of the economy has expanded rapidly since early this year. Gross national product rose at a 7.4 percent annual rate in the second quarter, after adjusting for the effects of inflation. Increases in the economy have been widespread. Industrial production — which includes the output of mines, factories, and utilities — has risen at a 9.8 percent annual rate since January (see chart). Housing starts have risen by about one-third since January, but the increase has merely restored the pace achieved prior to the onset of the unusually severe winter.

Employment has expanded strongly in conjunction with the rise in output (see chart). Since January, jobs have grown at a 5 percent annual rate. Indeed, employment growth has been impressive throughout the economic expansion. Since the trough of the 1973–75 recession, 10.5 million jobs have been added. Of these, about 8.5 million jobs have been newly created — that is, in excess of the number prior to the recession.

Income has moved up, reflecting rising employment, nominal wage increases, and other factors. Thus far during the economic expansion, personal income has grown at an annual rate of 11.5 percent but prices and taxes have risen also. Adjusting for these, disposable per capita real income, an important measure of the individual's economic well-being, has risen at only a 3.6 percent annual rate since mid-1975. Even this increase is an overstatement because income fell during the preceding recession. Since 1973 disposable per capita real income has edged upward at less than a 2 percent annual rate.

The economic expansion has been powered by consumer spending. Retail sales have exploded at a 16.3

Industrial Production



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percent annual rate since January (see chart). Paralleling the expansion in personal income, over the recovery as a whole retail sales have risen at more than an 11 percent annual rate. Consumer spending in the recent second quarter was up $47.3 billion (at an annual rate) from the first-quarter pace. The first-quarter gain was only $21.5 billion. The largest quarter-to-quarter shift was in consumer purchases of durables. During the second quarter, spending on durables rose $13.8 billion; such spending had declined $3.3 billion in the first quarter. To accommodate their increased spending, households reduced their savings rate from 5.9 percent to 5.3 percent of disposable income.

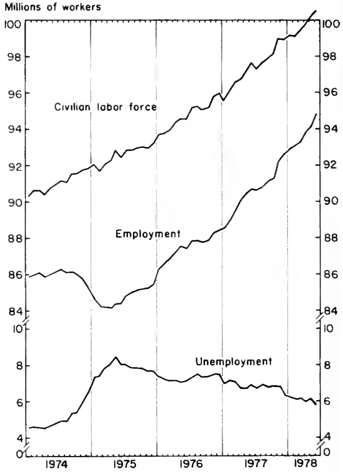
Inflation and Unemployment

The rate of inflation has accelerated in recent months (see chart), and has been rapid by historical standards throughout the expansion and preceding recession. The general price level — as measured by the GNP deflator — rose at more than a 10 percent annual rate during the recent second quarter. In the preceding three years of expansion, the general level of prices has risen at about a 6 percent annual rate. In the five years prior to the 1975 recovery, prices rose at nearly a 7 percent rate — with much of the inflation occurring in 1973 and 1974.

Food price increases have led the recent surge in inflation. Since last October prices of farm products have risen at well above a 20 percent annual rate. A major portion of these increases has been passed on to the consumer, whose food prices have risen at about a 15 percent annual rate. Considering the expansion as a whole, the farmer has fared poorly. Whereas his prices have moved up at less than a 3 percent rate, consumer food prices have risen at about a 5 percent rate. On average, the overall consumer price index has risen at about a 6 percent rate since 1975.

Unemployment has remained high notwithstanding the extended economic expansion. At 5.7 percent in mid-June, the unemployment rate has fallen more than 3 full percentage points since the depths of the 1973–75 recession. Even so the unemployment rate is more than a full percentage point above its level prior to the 1973–75 recession, and more than 2 percentage points above its level in 1969.

Employment and Unemployment



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High unemployment is unusual in the light of the strong and prolonged rise in employment. It is also regarded as an anomaly to find high unemployment associated with rapid inflation, but these are unusual times. The population of working age has grown rapidly over the past half-decade as a continuing consequence of the "baby boom" following World War II. Moreover, a much greater portion of the *potential* labor force has decided to join the *actual* labor force. In particular, the movement of women into the labor force is nothing short of a fundamental economic change.

Foreign Trade and Federal Deficits

The US has remained in a heavy deficit position in its international trade accounts. Although 1978 will mark the second successive year during which the value of the nation's imports of goods and services will exceed its exports, such deficits are unusual in post-World War II US history. Even as recently as the decade prior to 1977, in only one year did the US incur a balance of trade deficit.

Foreign nations acquire dollars by virtue of achieving surpluses in their trade with the US (the counterpart of our deficits). The excess supply of dollars in the hands of foreigners and the US's excess demand for foreign currencies serve to drive down the price of dollars. Since early 1977 the value of the dollar has fallen by more than 10 percent generally, but has dropped much more than

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that against certain currencies — most notably the Japanese yen.

Exchange rate adjustments such as those over the past year are thought to exercise an impact over future trade patterns. These devaluations have made foreign goods more expensive to US citizens, tending to discourage imports. At the same time, they have made US goods less expensive to foreigners, tending to encourage exports. To the extent that the theory works in practice, the US foreign trade deficit is expected to be self-correcting.

Balance of trade deficits are generally thought to act as a limitation to an expanding economy. Similar to a tax, expenditures on foreign goods are a "leakage" from the domestic spending stream. It has been argued that the restrictive effects of the foreign trade deficit must be offset by stimulative monetary and fiscal policies. In fact, a major share of federal deficits have been financed by foreigners. They have used their surplus dollars to purchase debt of the US Treasury.

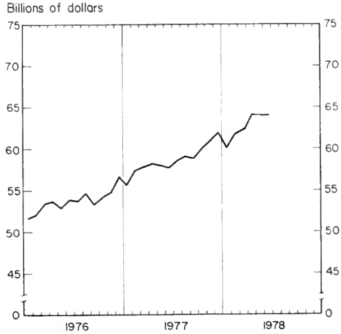
It should be pointed out that there is a contrary view. Some argue that the inflationary impact of federal deficits along with an expansive monetary policy have contributed to the US's foreign trade deficit. They argue that less domestic inflation would make home markets more attractive to both US citizens and foreigners. As a consequence, imports would be discouraged and exports encouraged.

Productivity

Productivity gains in the US economy have been meager since 1973. From 1973 to 1976 there was an actual decline in the growth of income per person employed. In contrast, from the end of World War II to 1969 the growth rate per employed person averaged 2.6 percent per annum. The slowdown in productivity has had an adverse impact on living standards, business costs, inflation, and government revenues. It is not clear whether the productivity slowdown is a fundamental *cause* of the more visible symptoms of economic malaise, or is, itself, just one more *result*. It is clear, however, that whatever the nature of the underlying disease, the adverse effects of the deterioration in productivity are both widespread and long term in their impact. The fruits of productivity require an extended ripening period. They emerge from a long chain of research and development, adaptation, and investment. Once that chain has been broken, years may be required before it can be forged anew.

It is my view that any federal initiative to restore vigor to the economy must be evaluated in terms of its prospective long-term impact on productivity. Similarly, regulatory efforts to improve working conditions, promote equity, protect our environment, or a host of other desirable goals need also to be evaluated in terms of their productivity impact. It is my view that the accumulated weight of government intervention in one form or another has had a pronounced adverse effect on productivity growth. One can but wonder whether the cake is worth the candle. WILLIAM R. BRYAN

Retail Sales



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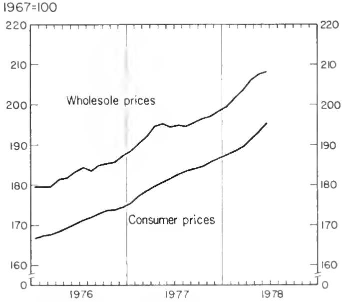
Wholesale and Consumer Prices



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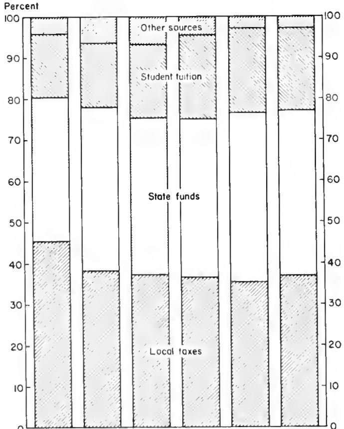
Local Illinois Developments

Financing Community Colleges

In 1975 the State promised to fund the difference between total (systemwide) educational costs of the community college system and the revenue generated from local property taxes and tuition. The state's share of direct funding (see chart) is divided among three types of grants. Credit-hour grants constitute the major share of state support ($102,195,000 recommended for fiscal 1979) and are derived by subtracting all other sources of revenue from the projected total educational budget. Disadvantaged student grants ($3,800,000) are also provided to enable colleges to offer special counseling, tutoring, and remedial-development courses. Since the community college system relies on local property taxes as a major source of funding, state provision of equalization grants ($10,355,800) necessarily arose from efforts to offset the tremendous variation in resources among communities. Indirect state funds are also provided by such state agencies as the Division of Adult Vocational-Technical Education and the Illinois Office of Education ($9,800,000 and $9,036,000 respectively).

Revenue Sources for Community Colleges[a]



[a] Federal funds included in "other sources."
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Illinois Business Indexes

Item	May 1978 (1967 =100)	Percentage change from Apr. 1978	Percentage change from May 1977
Employment-manufacturing[1]	n.a.		
Weekly earnings-manufacturing[1]	214.3	+0.1	+5.9
Consumer prices in Chicago[2]	189.0	+0.9	+8.4
Life insurance sales (ordinary)[3]	300.2	+12.3	+18.4
Retail sales[4]	230.9[a]	+2.9	+2.7
Farm prices[5]	224.0	+4.1	+8.2
Building permits-residential[4]	131.0	+20.5	-12.6
Coal production[6]	107.3	+12.8	+7.8
Petroleum production[7]	41.9	+3.7	-7.6

[1] Ill. Dept. of Labor. [2] US Bureau of Labor Statistics. [3] Life Ins. Agcy. Manag. Assn. [4] US Dept. of Commerce. [5] Ill. Crop Rpts. [6] Ill. Dept. of Mines. [7] Ill. Geol. Survey.
[a] Preliminary.

The uncertainty surrounding community college funding puts the system in a precarious position. Whereas universities and private colleges receive continuing state grants or scholarship funds, usually with some percentage increase each year, community colleges operate on a zero-base budget. If direct state aid is not granted in the recommended amounts, or if revenue estimates of tuition and local taxes are insufficient, the community college system, servicing 533,715 students in 1977, faces real financial trouble.

Since part-time students make up approximately 71 percent of the total student body in the system, cost and revenue estimates are calculated on a credit-hour basis. Total credit hours are divided by 30 to determine the full-time equivalent (FTE) enrollment. Tuition revenues are then estimated by multiplying projected FTE enrollment by $13 per credit hour. In 1976, however, enrollment was 17 percent higher than expected, and the lack of state funds resulted in insufficient supplemental appropriations. The community colleges received only a prorated share of the appropriation rather than the amount due to them based on the formula rate.

To alleviate funding problems, the Illinois Community College Board has recommended splitting the total budget revenue 50-50 between state, and federal sources, and tuition and tax revenues. The ICCB did not recommend a 50-50 split on credit-hour grant disbursal, however, favoring instead a plan of five variable rates for different types of programs and a 70 percent enrollment growth figure. These recommendations and others have yet to be satisfactorily worked out between the ICCB and the Illinois Board of Higher Education.

Comparative Economic Data for Selected Illinois Cities, May 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$ 73,535[a]	3,107.0[a]	$42,012[a]	n.a.	n.a.
Percentage change from	Apr. 1978	-38.6	-2.7	-3.8		
	May 1977	-57.3	-0.6	+0.6		
NORTHERN ILLINOIS						
Chicago		$ 21,796	1,533.5	$32,144	n.a.	n.a.
Percentage change from	Apr. 1978	-68.5	-3.7	-4.8		
	May 1977	-81.8	-1.4	-0.2		
Aurora		$ 3,555	112.9	$ 541	n.a.	n.a.
Percentage change from	Apr. 1978	-7.5	-11.0	+10.1		
	May 1977	+36.8	+8.3	+6.7		
Elgin		$ 1,968	75.2	$ 508	n.a.	n.a.
Percentage change from	Apr. 1978	+107.5	-4.9	-2.6		
	May 1977	-23.1	+0.5	+0.5		
Joliet		$ 9,988	350.7	$ 300	n.a.	n.a.
Percentage change from	Apr. 1978	+165.9	-0.1	-4.1		
	May 1977	+123.1	-0.9	+4.5		
Kankakee		$ 456	65.7[b]	$ 216	n.a.	n.a.
Percentage change from	Apr. 1978	-36.7	-1.2	-6.8		
	May 1977	+17.8	+7.5	-1.8		
Rock Island-Moline		$ 2,059	103.4[c]	$ 1,010	n.a.	n.a.
Percentage change from	Apr. 1978	-31.7	-4.3	-5.3		
	May 1977	-46.5	-6.0	[illegible]		
Rockford		$ 4,054	136.9	$ 798	n.a.	n.a.
Percentage change from	Apr. 1978	-28.8	-6.0	-0.6		
	May 1977	-66.9	+4.1	-2.5		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 5,851	40.2	$ 815	n.a.	n.a.
Percentage change from	Apr. 1978	-31.0	[illegible]	-9.7		
	May 1977	+38.2	-7.5	+5.0		
Champaign-Urbana		$ 5,117	43.8	$ 669	n.a.	n.a.
Percentage change from	Apr. 1978	+326.0	+0.9	+2.6		
	May 1977	n.a.	-9.1	+0.9		
Danville		$ 3,044	39.9	$ 213	n.a.	n.a.
Percentage change from	Apr. 1978	+122.8	-7.2	[illegible]		
	May 1977	+289.7	[illegible]	[illegible]		
Decatur		$ 2,898	111.0	$ 439	n.a.	n.a.
Percentage change from	Apr. 1978	-29.8	+1.0	+2.3		
	May 1977	-6.3	+12.3	[illegible]		
Galesburg		$ 1,186	28.0[b]	$ 141	n.a.	n.a.
Percentage change from	Apr. 1978	-7.1	-5.0	-4.0		
	May 1977	-35.2	+7.2	-6.0		
Peoria		$ 4,783	176.7	$ 1,226	n.a.	n.a.
Percentage change from	Apr. 1978	-44.8	-3.1	-1.8		
	May 1977	-8.1	+1.3	-0.8		
Quincy		$ 810	36.4	$ 207	n.a.	n.a.
Percentage change from	Apr. 1978	+97.5	-5.2	+7.8		
	May 1977	-50.2	[illegible]	-2.8		
Springfield		$ 4,124	106.6	$ 1,831	n.a.	n.a.
Percentage change from	Apr. 1978	[illegible]	+18.7	+9.7		
	May 1977	-35.3	-7.9	+12.9		
SOUTHERN ILLINOIS						
East St. Louis		$ 310	23.8	$ 147	n.a.	n.a.
Percentage change from	Apr. 1978	[illegible]	-2.8	-9.2		
	May 1977	+184.4	-1.6	-2.0		
Alton		$ 237	73.5	$ 109	n.a.	n.a.
Percentage change from	Apr. 1978	+55.9	+4.2	-13.4		
	May 1977	-24.5	-6.3	-4.3		
Belleville		$ 712	20.7	$ 409	n.a.	n.a.
Percentage change from	Apr. 1978	[illegible]	[illegible]	[illegible]		
	May 1977	[illegible]	[illegible]	+75.5		
Carbondale-Murphysboro		[illegible]	[illegible]	$ 289	n.a.	n.a.
Percentage change from	Apr. 1978	[illegible]	[illegible]	[illegible]		
	May 1977	[illegible]	[illegible]	+15.6		

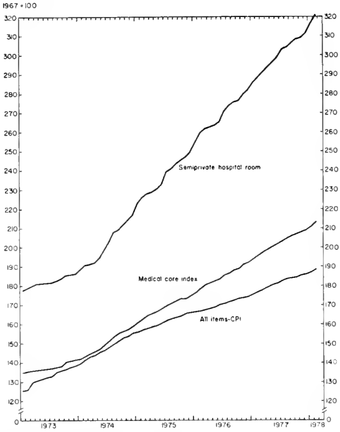
[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local post office reports; accounting period ending 19 May 1978. [4]Illinois Department of Labor.

[a]Total for cities listed. [b]Includes immediately surrounding territory. [c]Includes East Moline. n.a. Not available.

Rising Prices for Hospital Services

Health care is one element of the cost of living that is rising faster than the general rate of inflation. Last year medical care prices increased at an average annual rate of 9.6 percent. This compares with a 6.5 percent increase in the overall consumer price index. Between 1973 and 1977 the index for medical care increased at an average rate of 10 percent while the index for all consumer prices rose an average 8 percent (see chart). Health expenditures currently account for about 8.6 percent of gross national product — up from 7.2 percent in the early 1970s and 4.5 percent in 1950.

Comparative Price Indexes



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The fastest growing component of health care expenditures is hospital services; currently they account for 40 percent of the nation's health bill. (The next largest portion, about 19 percent, is spent on physician services.) In the past five years the cost has soared upward at an average rate of 13.3 percent. The Health Insurance Institute reports that between 1970 and 1975 the average cost to a community hospital per patient-day rose from $81 to $150. In 1976 the "average" Illinois hospital received $183 in gross revenue per inpatient-day for hospital care. In the Chicago area the average reached $209 per day.

In the 1950s hospital costs grew only slightly faster than the rest of the economy. Most of the increases were attributable to labor costs, which were steadily catching up with manufacturing wage advances. In the early 1960s, however, nonlabor costs started to rise more rapidly than labor costs and the average length of stay in hospitals started to climb. From 1960 to 1965 nonlabor costs per admission grew 7 percent annually compared with 3 percent in the previous decade. The explosion of hospital costs after 1965 is partly attributable to the beginning of the medicaid and medicare programs and the expansion of coverage by private programs. In general, reimbursement methods offer very little incentive to control rising costs that are boosted by general inflation, inefficiency, and other root causes.

Hospitals do not normally face the checks and balances of a competitive marketplace as do other service or manufacturing industries, so it is not surprising that the price of hospital care is rising faster than other items. In many hospital situations there are no market forces which hinder higher costs from being passed on to consumers. Little consumer resistance is met, since prepayment health plans pay for the higher medical costs. In addition, consumers seldom shop around for hospital services or have the chance to do so in emergency situations. More frequently it is the patient's doctor who orders the type of care, orders the tests and operations, and determines when the patient will be discharged. Although there are budding government and nongovernment endeavors to publicize physicians' fees and apply antitrust strictures to the medical profession, to date legislators have found this route undesirable.

Third-Party Financing

Who pays for the increasing costs of medical care, and why has there been so little consumer resistance to higher prices? According to recent polls a substantial majority of Americans agree that "we could afford to spend [even] more to improve the quality of health care." Part of the answer appears to be that our health care delivery system has developed into what is characterized as a third-party-payment system, with the government picking up an increasing share of the annual bill. The largest portion of personal health care expenditures is now financed by these third-party groups (private health insurance companies, government, and philanthropic sources). Together they paid 67 percent of all health costs in 1975, a substantial increase over 1960 (before medicare and medicaid), when they financed only 48 percent. For persons under 65, private health insurance paid 35 percent, government 29 percent, and philanthropic sources 2 percent. The remainder (34 percent) represented out-of-pocket payments.

The third-party-payment system is overwhelmingly the principal means of financing hospital bills. In 1975, 178 million Americans were protected by one or more forms of private health insurance covering hospital expenses. Included were 12.6 million older persons — 6 out of 10 of the 65 and older population — who hold private policies to supplement benefits available through medicare.

Medicare entitled more than 24.2 million people to hospital insurance in 1975. This total included 2.1 million disabled persons who were entitled to benefits. Under medicaid legislation the federal government matches state funds for programs that assist persons whose income and resources are regarded as insufficient to pay for health care regardless of their age. Illinois medicaid payments rose from $200 million in 1970 to $770 million in 1976, making medicaid one of the fastest growing public programs in Illinois. Hospital payments accounted for 40 percent of those expenditures.

Table 1. Percentage Occupancy Rates

Size (beds)	Illinois	US
6-24	44.5	47.6
25-49	55.3	55.7
50-99	60.9	63.5
100-199	69.8	70.5
200-299	74.7	76.6
300-399	80.8	79.0
400-499	79.9	80.3
500 or more	81.8	80.9
Average	76.2	74.6

To many, the higher costs for hospital services are hidden from sight by the third-party system. Most people are enrolled in employment-based plans through private companies or else they receive their benefits through compulsory government levies. Higher hospital costs and higher insurance premiums are then easily passed along before take-home pay and income tax. Health insurance premiums paid to private insurance companies — Blue Cross-Blue Shield and other hospital medical plans — rose to 3.6 percent of disposable personal income in 1975 and have been increasing gradually for some time.

Another factor contributing to rising hospital costs has been the growth of medical malpractice lawsuits. A health insurance association has estimated that these suits have added as much as $1.5 billion a year to the public bill for health insurance. The US Department of Health, Education, and Welfare estimates that $3 billion to $5 billion a year is spent on unnecessary "defensive medicine" practices.

Utilization Ratios

A familiar criticism raised against the hospital industry is its low occupancy ratio — the ratio of utilized beds to total at any given time. In 1976 the national average for short-term general hospitals was 74.6 percent (the "average" hospital on an "average" day had 25.4 percent of its beds unfilled). In that same year Illinois had a 76.2 percent occupancy rate. Many hospital analysts have criticized hospitals for operating with "excess capacity" and assert that 20 percent of hospital beds are unnecessary. They argue that consumers of hospital services pay the fixed costs of maintaining these vacancies. A recent industry report indicates that "powerful community interests usually favor the building of a new hospital or expanding an existing one, and oppose the curtailment of services in an existing hospital regardless of occupancy rates or other measures of efficiency." A recent Harris Poll reflects the controversy over the utilization issue. Seventy-one percent of the people interviewed in a recent hospital study said that all hospital beds in their area were necessary and only 12 percent argued that there were too many beds. Among doctors, 38 percent agreed that there were too many beds; 97 percent of health insurance executives agreed; and 49 percent of hospital trustees interviewed agreed.

Table 1 compares the average occupancy rates for Illinois community hospitals with the US average by size of hospital (as indicated by number of beds). The 1976 occupancy rate for the Chicago area was 79.9 percent. The rate for Illinois community hospitals outside of Chicago was 70.4 percent and the occupancy in nonmetropolitan hospitals throughout the State averaged an even lower 64.1 percent.

Another common indicator of hospital utilization is average length of stay. In 1976 the average length of time a patient remained in a community hospital was 7.7 days. This compared with an average of 8.2 days in 1970. Table 2 compares 1976 utilization rates for Illinois with the US average. In all of nine class sizes Illinois rates are higher than the national average.

Profile of Illinois Hospitals

In 1976 there were 277 nonfederal hospitals in Illinois. An additional 10 federal units — all general hospitals — operated in the State. Included in the nonfederal classification were 247 general community hospitals, 24 psychiatric units, and 6 long-term hospitals and specialty hospitals. Together these 287 hospitals provided more than 77,000 beds (5.7 percent of the US total) and employed over 182,000 full-time personnel (almost 3.5 percent of the Illinois labor force). Included were 2,900

Table 2. Average Length of Stay

Size (beds)	Hospitals		Av. stay (days)	
	Ill.	US	Ill.	US
6-24	6	290	6.1	5.5
25-49	20	1,124	6.2	5.9
50-99	45	1,446	7.1	6.8
100-199	61	1,370	7.2	7.1
200-299	49	711	7.6	7.5
300-399	19	376	8.1	7.8
400-499	21	234	8.3	8.0
500 or more	21	306	9.1	9.0
Total	242	5,857	8.0	7.7

physicians and dentists, 31,500 registered nurses, 10,200 licensed practical nurses, and 137,000 other salaried personnel. An additional 86,000 individuals belonging to hospital auxiliaries donated approximately 4.5 million hours of service to Illinois hospitals last year.

There were only eight private for-profit hospitals in the State in 1976 and they accounted for only one-half of 1 percent of the state's total number of beds. Community hospitals are predominantly organized on a not-for-profit basis (three-fourths of the community hospitals). State and locally run hospitals numbered 44 in 1976.

A profile of the "average" Illinois hospital can be constructed from the American Hospital Association's 1976 survey of hospitals. The "average" Illinois community hospital has 229 beds; 24 percent of these are not in use. Each bed will be used 34 times in a year. The average patient will stay in the hospital eight days and will accumulate $1,332 in expenses. About 53 percent of the hospital bill will go for paying the salary of hospital personnel. The average salary per full-time employee in 1976 for Illinois was $9,939.

Chicago Profile

The city of Chicago ranks number two nationally in total hospitals, beds, and patient-days for a metropolitan area. There were 104 short-term nonfederal community hospitals located in the Chicago area in 1976. These hospitals operated 33,500 beds and provided 9.8 million patient-days of care (64 percent of the state total). Almost three-fourths of these patient-days were recorded at hospitals averaging occupancies in excess of 80 percent.

More than 72 percent of total 1976 expenses for all Illinois community hospitals were incurred by hospitals in Chicago. Payroll expenses constituted 53 percent of this total. On average, three full-time people were employed per bed in Chicago area hospitals, which compares with the national average of 2.5 full-time personnel per bed. Slightly more than 67 percent of all the state's hospital employees work in community hospitals in Chicago, where 61 percent of all Illinois community hospital beds are located.

A common prescription for the economic ills of the hospital industry calls for the reduction of duplicate facilities through mergers and sharing of services. The Chicago Hospital Council, chartered in 1935, is one such effort. The council, whose membership includes 98 hospitals throughout the Chicago metropolitan area, functions as an integrated representative body as well as a support unit for research and regional hospital standardization. Shared computer terminal, courier, and laundry services are also cost-saving activities offered to member hospitals. In addition, a group purchasing service — the largest in the US — works to minimize hospital costs through bulk purchasing of high-volume hospital supplies. MICHAEL TREBING

When Is Monetary Policy Tight?

THOMAS B. BRYAN AND WILLIAM R. BRYAN

A casual review of popular discussions of current business conditions reveals numerous references to Federal Reserve "tightening" of monetary policy. This is not unusual. Indeed, periods of rising interest rates are frequently attributed to "tight money," and falling interest rates are characterized as "easy money" periods. In light of these popular descriptive terms, it is reasonable to expect increases in interest rates during periods of slow money supply growth and decreases in rates when the money supply is expanding rapidly.

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However, experience over the past 10 years has been inconsistent with this expectation. That is, rising interest rates have been associated with an increase in the rate of growth in the money supply, and decreasing interest rates have been associated with declines in the pace of monetary growth.

In part, the apparent contradiction between expectations and experience simply reflects the ambiguous use of the word "money." Beyond the semantic confusion, however, there are problems in substance. It appears that the *implementation* of monetary policy is systematically at variance with the *intentions* of policymakers. Thus, policy and practice appear to contribute to procyclical instability rather than to the moderation of the business cycle. It is inviting to wonder about the extent to which a seemingly innocent semantic difficulty may contribute to longer-term economic instability.

After exploring the alternative uses of the word "money," this article examines selected strands of US economic experience over the past decade. First, there is a discussion of credit developments, including related movements in prices and interest rates. Next, there is

a review of changes in the monetary base over the past decade, including a discussion of Federal Reserve operating procedures. Finally, the strands of experience are pulled together and evaluated.

Uses of the Word "Money"

The word "money" is used in more than one sense. For example, periods of rising interest rates are frequently referred to as periods of "tight money." Typically, such periods are characterized by economic expansion — when demands for credit exceed supply. Interest rates, the price (or cost) of credit, move upward to balance the quantities demanded with the quantities supplied (see Table 1). During recessions, interest rates typically decline as demands for credit fall relative to supplies. Frequently, this condition is characterized as "easy money."

Table 1. Money Definitions and Underlying Supply/Demand Relations in the Business Cycle[a]

Money as	State of the economy	
	Expansion	Recession
Credit	Tight	Easy
Liquidity	Easy	Tight

[a]Tight = demand exceeds supply; easy = supply exceeds demand.

According to this usage, the word "money" is used to refer to "credit." In turn, the term "credit" refers to loans from surplus to deficit spending units. Surpluses and deficits emerge as a result of a discrepancy between the distribution of spending and the distribution of income.

The word "money" is also used to denote a limited collection of specific financial assets capable of performing a limited set of economic functions. There is a continuing debate over the distinctive characteristics of money and, hence, its proper definition. Some choose to gauge changes in the quantity of money by observing changes in M1, demand deposits plus currency; others choose M2, demand deposits plus currency plus time deposits. It is beyond the scope of this article to enter that debate. Hence, we shall sidestep the issue by simply asserting that money possesses a high degree of "liquidity."

According to this usage, "tight money" refers to a situation in which the demand for money exceeds its supply. There is a view that a decline in economic activity is characterized — even explained — by such a set of affairs (see Table 1). Because desired money balances exceed actual money balances, the public reduces its rate of spending. In contrast, an expansion in economic activity is caused by "easy money," a situation within which actual money balances exceed desired balances. To remove these excess balances, the public accelerates its rate of spending.

As with credit, there is a cost associated with holding money balances. As stated earlier, the interest rate is regarded as the cost of credit; the rate of inflation is most meaningfully regarded as the cost of holding money. When the supply of money increases relative to its demand or when actual balances exceed desired balances, the value of money relative to other goods and services falls. That is, there may be an increase in the rate of inflation associated with the increased spending.

Credit, Inflation, and Interest Rates

During the past decade there have been three periods of rising interest rates: 1968–70, 1972–74, and 1977 to the present (see chart). These periods were marked by increased demand for credit (as reflected by changes in commercial bank loans) and increases in inflationary pressures (as reflected by changes in consumer prices). The rate of interest shown on the chart is the federal funds rate (the rate of interest charged among banks for very short term loans to one another).

With interest rates responding to excess demand for credit and upward movements in general prices, these time frames may be referred to as periods of "tight money." Interest rate changes during these periods may be explained in two ways. First, the rate of interest may be regarded as a price — the price of credit. If the demand for credit is greater than supply, the price of credit increases. Note that rates of increase in bank credit, as summarized by the chart and Table 2, are greater during these periods of rising interest rates. Second, during inflationary periods a lender will attempt to incorporate the expected inflation rate into the rate he charges the borrower. He must do this in order to realize any specified "real" rate of return on his loan funds. Thus when prices are expected to increase, interest rates will rise in accordance with the added inflation premium. Note that the rate of interest was greater during periods of rising prices (see chart and Table 2).

Table 2. Annual Rates of Change in Selected Indicators[a]

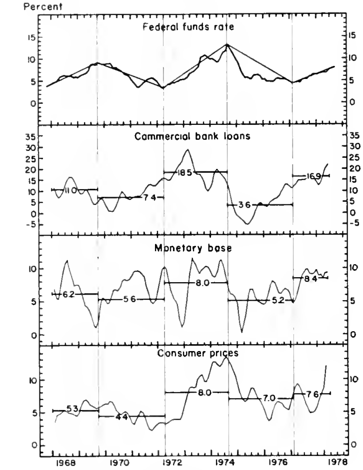
Indicator	Direction of interest rate changes	
	Rising (Tight)	Declining (Easy)
Bank loans	15.5	5.5
Consumer prices	7.0	4.2
Monetary base	7.5	5.4

[a]Percentage changes are unweighted averages of bars shown on chart.

Two periods of declining interest rates are shown on the accompanying chart and summarized in Table 2. These were also periods that included, in each instance, a general weakening in economic activity. Episodes such as these are generally characterized as periods of "easy money."

It will be noted that the growth in bank loans moderated during these periods. It is probable that loan demands fell relative to readily available supplies. Inflation rates were also more moderate; indeed, as indicated earlier, there is a view that declines in interest rates merely reflect reductions in inflation premiums.

Selected Economic Indicators



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Changes in the Monetary Base

The word "money" also refers to a quantity of selected liquid assets. Expansionary periods, according to "monetarists," are characterized by "easy money" — a situation in which *actual* money balances exceed *desired* balances. Recessions are characterized by "tight" money — a situation in which *desired* money balances exceed *actual* balances.

In light of these theoretical considerations, it is reasonable to expect that countercyclical monetary actions will help the public bridge the gap between their *desired* and their *actual* money supply positions. If business expansions are periods when the public acts as if there is too much money, monetary policy might appropriately be geared toward slowing money supply growth. This would especially be the case if the business expansion were accompanied by accelerated inflation.

If during periods of recession the public behaves as if it holds too little money, households and business firms will attempt to build up their money balances by reducing their rate of spending. During such a period, countercyclical monetary policy would be geared toward helping the public satisfy its demand for money.

To summarize, it is reasonable to believe that countercyclical monetary policy actions will produce a slowdown in money supply growth during periods of business expansion and an accelerated growth during recessionary periods. That is, countercyclical actions would produce a money supply pattern running counter to that suggested in Table 1.

Monetary policy actions regarding money supply developments are depicted in the chart and summarized in Table 2. Rather than to aim at a specific money supply, Federal Reserve actions are depicted in terms of rates of change in the monetary base. The monetary base, the major determinant of the money supply, is composed chiefly of currency in circulation and member bank reserves at Federal Reserve banks. Open market operations of the Federal Reserve — that is, purchases and sales of government securities — result directly in changes in the base.

This monetary aggregate has moved *with* interest rate changes over the past decade (see chart). What this has created is expansionary periods in our economy being marked by "tight" credit conditions, but with "easy" money — viewed in terms of liquidity. During recessionary periods there has been "easy" credit but "tight" money — in terms of liquidity. These results are also summarized in Table 2.

Such a pattern of developments is *procyclical.* It adds further stimulation to the factors pushing the economy in either an expansionary or a recessionary direction.

Notwithstanding the summary of actions presented here, the Federal Reserve does not intend to be procyclical. How can it be that their *implementation* differs from their *intentions?* It is our view that the Federal Reserve has an operating predilection toward moderating day-to-day movements in interest rates. In periods of rising interest rates the Federal Reserve tends to resist excessively rapid increases. In periods of falling interest rates, the Federal Reserve tends to resist abrupt declines. In the case of rising interest rates the Federal Reserve purchases US government securities in the open market. By doing so the Federal Reserve increases demand pressures in the market, thereby moderating the decline in security prices. The main intention of this operation is to moderate the upward movement in the rate of interest. That is, interest rates will rise but their upward climb will be less rapid than would otherwise be the case.

When the Federal Reserve buys securities it simply writes a check. This expands the monetary base and thereby fuels the money supply expansion process, giving rise to further inflation, further upward pressures on interest rates, and further Federal Reserve intervention.

To the extent that open market operations of the

Federal Reserve are induced by shifts in the demand for credit, the monetary authority no longer exercises an independent control over the money supply. Instead, the money supply becomes the "tail" — "wagged" by the vagaries of shifting conditions in credit markets. Rather than *determining* movements in the economy, short-run changes in the money supply are *determined* by changes in the economy. Only later, through the pernicious effects of inflation, will the money supply exercise an effect on the course of economic activity.

Summary and Conclusions

It is our contention that Federal Reserve operating procedures produce procyclical results. We argue that their day-to-day operations serve to cushion the interest rate impact of changing credit conditions. Thus, during "tight" credit conditions interest rates do not rise as rapidly as would otherwise be the case, nor do they fall as rapidly during periods of "easy" credit. Instead, the Federal Reserve tends to buy more heavily during periods of economic expansion and to buy less heavily (or even sell) during periods of economic recession.

An unwanted side effect of their short-term operating habit is to produce, or reinforce, "easy" money during periods of "tight" credit — that is, periods of business expansion. It also produces, or reinforces, "tight" money during periods of "easy" credit — that is, during recessions.

There is a view that the short-term emphasis of the Federal Reserve on softening day-to-day movements in the federal funds rate serves to widen interest rate movements over the longer run. It is argued that procyclical Federal Reserve actions tend to increase the variance in rates of inflation. To the extent that changes in inflation "feed" into interest rate changes through alterations in the inflation premium, such an argument is of consequence.

An undertone of this article may just as well be made explicit. It is our view that the economy would be better served by Federal Reserve operations designed to achieve well understood money supply growth targets. While we recognize that a menu of monetary growth targets is announced from time to time, the choice of targets is so varied and the acceptable range for any given target is so great that the Federal Reserve need not really take aim. It could not fail to hit something. As a result, day-to-day operations of the Fed are left essentially undisturbed.

If Federal Reserve actions were geared toward achieving a more stable rate of growth in, for example, the monetary base, it is feared by some that there would be increased day-to-day instability in short-term interest rates. We do not share this fear. A market economy has a strong capacity for generating devices to overcome unwanted events. Even if there were an increase in short-run interest rate instability, such a state of affairs would be only temporary. It would create irresistible profit opportunities. As those opportunities were exploited, the short-run interest rate instability would be moderated.

In any event, it is our view that longer-term interest rate movements would be limited by a more stable growth in monetary aggregates. Another way of stating this conclusion is to assert that a reduced and stable growth in money would foster a more moderate and less volatile rate of inflation.

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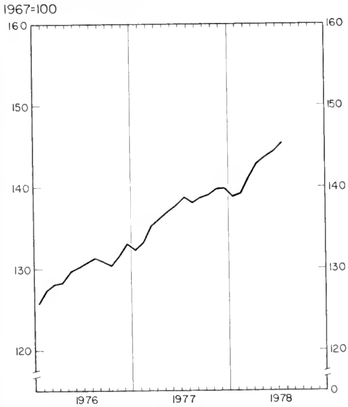
The Economy — More of the Same

Real output of the economy has moved upward at a brisk rate. Even so, prices of a wide range of goods and services have moved higher. Monetary actions continue to be expansive, and interest rates have stabilized temporarily at a high level.

The recent surge of "double-digit" inflation cannot easily be traced to special factors. There has not been a dramatic surge in energy prices; there have not been major crop failures; the nation is not at war; the economy is not in the grips of major labor-management dislocations. Instead, the current inflation probably results from excessive aggregate demand.

Industrial Production



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Growth in Industrial Output

Industrial output has expanded rapidly since late last year (see chart). Since December, the index of industrial production has risen at a 7 percent annual rate. By comparison, output grew at only a 2.8 percent rate during the preceding half-year. Rising output of business equipment in recent months has fostered hope that business investment may make an increasing contribution to the economy.

Housing has not been a factor in the expansion since the spring of 1977. Instead, it has remained virtually unchanged on balance for well over a year, as housing starts have fluctuated around the 2.1 million annual rate. When home-building stabilizes — even without an actual decline — current production may well drop in other industries previously geared toward supporting an expansion in housing, for example, building materials, home furnishings, and major appliances.

Strength in Labor Markets

Jobs have expanded rapidly since early this year, continuing the experience of much of the current economic expansion. Since February, employment has risen at a 3.6 percent annual rate, little changed from the pace of increase since April 1975; 58.6 percent of the population of working age were employed in mid-July. On average, since World War II the economy has provided jobs for about 55 percent of the working age population. Hence, if judged in terms of its ability to provide jobs, today's economy is very strong.

The unemployment rate has fluctuated near the 6 percent level since early this year. In mid-July it jumped to 6.2 percent, after falling to 5.7 percent in mid-June. Then it dipped to 5.9 percent in mid-August. Fluctuations such as these probably have little to do with underlying developments in the economy. Instead, they are likely to reflect statistical problems in handling teenager movements into and out of the labor force.

Expansion in Income and Spending

Income expanded rapidly in recent months and over the year, continuing a surge that has persisted over the past six years. Since mid-1977, personal income has risen nearly 12 percent, and after-tax income has gained nearly 11 percent. Since 1972 these income measures have registered average rates of increase in excess of 10 percent. Only in part do these advances in income reflect higher employment and productivity. Since 1972, employment has risen 2.4 percent per annum, and productivity is estimated to have increased just over 1 percent per annum.

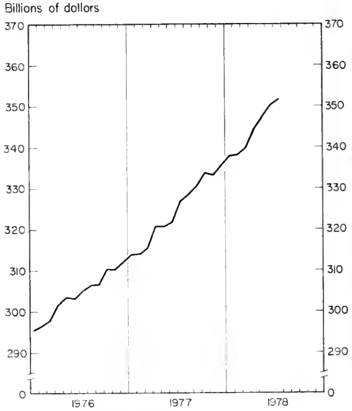
In recent months, gains in consumer spending have moderated. Retail sales have edged upward at a 2.1 percent annual rate since April. The Conference Board's measure of consumer confidence has declined in five of the past six months. In addition, its index of consumer buying plans — a measure of intentions to purchase homes, new and used cars, and major appliances — has dropped to its lowest level since the spring of 1975. Considering a longer time frame, however, spending has registered strong gains — reflecting increases in income. Consumer spending rose 11.4 percent in the year ending in the second quarter, and retail sales have risen at an average annual rate of 9.4 percent since 1972.

Acceleration in Inflation

The rate of inflation has burgeoned since late last year. Both consumer and producer prices have risen at "double-digit" rates since December. The surge in producer prices has centered in food prices; farm products and processed foods have risen at more than a 20 percent rate. But there is no presumption that shrinking supply has induced the renewed inflation.

It is easy to outline alternative explanations for the current inflation, but it is difficult to place much confidence in any specific alternative. It is possible to explain inflation in terms of a wage-price, or a price-wage, spiral. It is quite clear that there is strong momentum for wage settlements well in excess of the growth in the economy's real output. From the point of view of each interest group, such increases are necessary in order to "keep up with inflation." There is a widespread view that government is responsible for inflation. Some blame the federal government's overpowering inclination to spend in excess of tax revenues. Others point to excessive government regulation, asserting that it has shackled the growth in productivity. Still others point to excessive growth in the money supply as the chief cause of inflation.

Money Supply



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Easy Monetary Policy

Monetary actions continue to be expansive. The money supply defined to consist of checking accounts plus currency, M-1, has risen at more than a 7 percent rate since the end of last year and at an 8.6 percent rate since March (see chart). The money supply plus time deposits, M-2, has expanded at just over an 8 percent annual rate since December and at nearly a 9 percent rate since April. These increases are substantially greater than during the 1973–75 recession; they are also more rapid than during the early phases of the economic recovery.

Interest rates have stabilized since early July. However, they remain at an extremely high level by historical standards. The prime rate (the rate charged by banks to major corporate customers) remains at 9 percent, the highest level in more than three years. Interest rates on short-term, highly liquid, investment-type securities — such as Treasury bills — have moved higher than rates available to ordinary savers on savings accounts. In the past, such a state of affairs has led to "disintermediation" — the flow of funds from savings institutions into market instruments. In turn, home mortgages customarily made by banks and savings and loan associations have become increasingly difficult to obtain.

WILLIAM R. BRYAN

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Local Illinois Developments

Illinois Business Indexes

Item	June 1978 (1967 =100)	Percentage change from	
		May 1978	June 1977
Employment-manufacturing[1]	89.8	n.a.	+1.3
Weekly earnings-manufacturing[1]	219.0	+1.0	+6.2
Consumer prices in Chicago[2]	190.4	+0.7	+8.7
Life insurance sales (ordinary)[3]	288.4	-3.9	+12.0
Retail sales[4]	233.6[a]	+1.1	+4.4
Farm prices[5]	227.0[a]	+1.3	+12.9
Building permits-residential[4]	132.2	+1.0	-9.0
Coal production[6]	96.9	-9.6	+8.7
Petroleum production[7]	40.6	-3.0	-8.0

[1]Illinois Dept. of Labor. [2]US Bureau of Labor Statistics. [3]Life Ins. Agcy. Manag. Assn. [4]US Dept. of Commerce. [5]Ill. Crop Rpts. [6]Ill. Dept. of Mines. [7]Ill. Geol. Survey.

[a]Preliminary. n.a. Not available.

End of the Illinois Fiscal Crisis?

During fiscal year 1977 the state government cash reserve balance fell to a perilously low total of $52 million. With the yearly expenditures and revenues in the vicinity of $6 billion, that cash reserve was grossly inadequate as a cushion between the inflow and outflow of funds. The situation was such that state bills were being paid irregularly, with creditors and local governments waiting excessive lengths of time for payments. In fiscal year 1977 state expenditures of $6,004 million exceeded revenues of $5,930 million by a total of $74 million. If this situation had repeated itself in fiscal year 1978 Illinois would have seen a serious cash flow problem turn into a crisis situation of not having necessary funds to pay its obligations on a current basis.

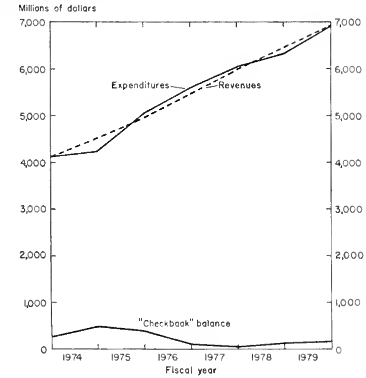
However, the state's "checkbook" balance has been slowly improving. In fiscal year 1978 revenues exceeded expenditures by $33 million, thus bringing total cash reserves up to $85 million. Projections for fiscal year 1979, which began on 1 July, are for revenues to exceed expenditures by $11 million, bringing the cash balance up to $96 million by the end of the fiscal year. If the projections of the inflow and outflow of funds are reasonably accurate, there will be a further gradual improvement in the state's financial position.

It is difficult to say exactly how much money a state should hold in reserve. If the balance falls too low, creditors have to wait longer for payments due them and may eventually refuse to do business with the State. In addition, local governments, school districts, and welfare recipients may suffer undue hardships if their shares of state revenues are not forthcoming in a timely manner. On the other hand, the State should not retain large cash balances, but rather spend them or grant tax relief to benefit the citizens. The experience of California under Proposition 13 demonstrates the pitfalls of a state's accumulating a large cash reserve. In the opinion of some analysts, the state's "checkbook" balance should average at least $100 million if its bills are to be consistently paid on time.

There are, of course, other factors to be considered in a decision to let reserves dwindle or accumulate. Few would argue that the State should intentionally spend more than it receives. However, during an economic slowdown such as that in FY 1975 and FY 1976, the State may knowingly spend more than it takes in because its obligations at such times may outrun its income. If that policy is followed, reserves must be allowed to accumulate again when the economy recovers.

Two major determinants of the financial condition of the State in coming months will be the final form of the FY 1979 budget and the accuracy of the Bureau of the Budget's projections. The final form of the budget depends still on what expenditures the governor vetoes and what the legislature does about overrides when it reconvenes in the fall. The Budget Bureau's projections depend partly on the final budget and partly on the course of the economy. The bureau's currently projected cash surplus of $11 million leaves a very small margin for error in a budget of more than $6 billion.

Illinois State Revenues and Expenditures



Bureau of Economic and Business Research

Water Use in Illinois

Illinois residents use 25 percent less water than the per capita average for the United States. The US Geological Survey has been compiling data since 1950 which show trends in water use in Illinois as well as in the rest of the country. These trends are useful in appraising the present, and planning future, utilization of the state's water resources. The 1977 Survey shows that Illinois residents use an average of 1,200 gallons of fresh water per day per capita. This compares with the US average of 1,600 gallons per day per capita.

In order to evaluate the reuse potential for water, it is important to characterize it in terms of its initial use. The latest Survey uses four categories: (1) public supply (water obtained for domestic, commercial, and industrial uses from a water utility that serves the general public), (2) rural use (water obtained for domestic and livestock use and not served by a water utility), (3) irrigation, and (4) self-supplied industrial (including thermoelectric power).

Given these four types of initial water use, it is possible to evaluate the reuse potential of the return flow. For example, irrigation return flow may be contaminated by pesticides and fertilizers, resulting in little reuse potential. By comparison, nearly 90 percent of the water withdrawn by manufacturing and other industries is returned to water sources for additional use. *Withdrawal use* is defined as the amount of water withdrawn from its source; *consumption* is defined as water used and no longer available because of evaporation, incorporation into products and crops, consumption by people or livestock, or otherwise removed from the water environment.

Types of Water Use

In Illinois, as in the entire US, more water is withdrawn and consumed for industrial use than for any other category. Water used by electrical utility plants is tabulated separately from other industrial uses in the Survey because of its magnitude. Not only does the power industry withdraw the largest quantity of water for off-channel use (all withdrawal uses other than water withdrawn for hydroelectric power generation), but the rate of increase in usage by thermoelectric power plants makes the self-supplied industrial use the fastest growing of the major withdrawal uses. Because of the large demand, thermoelectric plants find it economically necessary to furnish practically all of their own water. According to the latest Survey, fresh water consumption in Illinois reached 88 million gallons per day (mgd) for thermoelectric power (electric utility) and other industrial uses. This was only 1 percent of the national fresh water consumption for this category. Fresh water withdrawn by electric utilities and other industrial uses amounted to 10,740 mgd, 10 percent of the national total. This suggests that utilities in Illinois have a relatively high efficiency rate of returning water for additional use.

Rural fresh water consumption (domestic and livestock) was 54 mgd, only 2 percent of the national total and second only to industrial fresh water consumption in Illinois. Total water withdrawn for rural use reached 60 mgd, of which 42 mgd was withdrawn for (and consumed by) livestock and 18 mgd for domestic purposes. High consumptive use for livestock frequently results from failure to limit the amounts of water being supplied. In some instances, water from flowing artesian wells and unbraked windmills is allowed to run over the land surface where the water is either evaporated or transpired by nonproductive vegetation.

Irrigation constituted the third major use of fresh water consumed. Total Illinois fresh water consumption for irrigation purposes was 41 mgd, compared with a US total of 80,000 mgd. Data from the Survey show that in 1975, Illinois irrigated 68,000 acres. Illinois used no reclaimed sewage water for irrigation.

Water used for public supplies in Illinois included a total water withdrawal (ground and surface water) per capita of 199 gallons per day (compared with 198 gpd for the US), water delivered for industrial and commercial uses of 630 mgd (9,100 mgd in the US), water delivered for domestic use of 1,500 mgd (20,000 mgd in the US), and fresh water consumption of 21 mgd (6,700 mgd in the US). In addition to domestic and industrial uses, public supplies include water used for firefighting, street washing, and municipal parks and swimming pools.

Trends in Water Use

Over a recent five-year period, withdrawal use in the US for all four categories rose by 11.5 percent. This compared with a 10 percent increase in fresh water consumption. Although the 1977 Survey does not explicitly describe trends in water use in Illinois, one may extrapolate information, given US data. The Survey shows steady rates of increase in water uses, with only surface water used for irrigation showing an irregular trend. Industrial withdrawal use rose by 12.8 percent and irrigation use and public supplies increased by 10.8 percent and 7.6 percent, respectively.

Availability of water in any particular year strongly affects water used for irrigation and may explain the irregular trend for this category. The trend also reflects a slightly greater average amount of water required per acre for irrigation purposes in 1975 than in 1970, but less than the average amount of water needed from 1960 to 1965. In addition, the increase in acreage in 1975 (9.4 percent) was considerably greater than the increases that took place from 1960 to 1965 (1 to 3 percent).

It appears from the Survey that less water has been used than was forecast earlier. The general slackening in the rate of increase was most evident in thermoelectric power and general industrial water withdrawals. Despite the slowdown in the rate of increase in withdrawals in the US, the percentage increase in withdrawals averaged about twice the rate of population growth.

SUSAN LINZ

Comparative Economic Data for Selected Illinois Cities, June 1978

	Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS	$ 83,813[a]	3,319.4[a]	$41,642[a]	4,734.9	5.2
Percentage change from May 1978	+13.9	+6.8	-0.8		
Percentage change from June 1977	+3.7	-2.3	+7.4		
NORTHERN ILLINOIS					
Chicago	$ 38,361	1,605.2	$31,730	3,230.8[b]	6.0[b]
Percentage change from May 1978	+76.0	+4.6	-1.2		
Percentage change from June 1977	+29.8	-5.0	+10.2		
Aurora	$ 3,823	109.5	$ 566	37.8	5.8
Percentage change from May 1978	+7.5	-3.0	+4.6		
Percentage change from June 1977	+11.5	-7.0	+26.0		
Elgin	$ 2,215	78.2	$ 601	27.6	6.7
Percentage change from May 1978	+12.5	+3.9	+18.3		
Percentage change from June 1977	+73.3	+3.7	+34.7		
Joliet	3,926	371.5	$ 339	46.3	6.1
Percentage change from May 1978	-60.6	+5.9	+13.0		
Percentage change from June 1977	+57.3	+4.3	+23.2		
Kankakee	800	62.9[c]	$ 223	37.4[b]	8.6[b]
Percentage change from May 1978	+75.4	-4.2	+3.2		
Percentage change from June 1977	+81.4	-4.6	+27.9		
Rock Island-Moline	$ 3,429	126.5[d]	$ 1,014	173.4[b]	5.4[b]
Percentage change from May 1978	+66.5	+22.3	+3.9		
Percentage change from June 1977	-6.2	-1.1	+26.1		
Rockford	$ 2,899	146.6	869	130.0[b]	5.4[b]
Percentage change from May 1978	-28.4	+7.0	+8.8		
Percentage change from June 1977	-20.6	-3.3	+16.8		
CENTRAL ILLINOIS					
Bloomington-Normal	$ 5,428	49.3	$ 927	57.3[b]	4.6[b]
Percentage change from May 1978	-7.2	+22.6	+13.7		
Percentage change from June 1977	+9.5	+0.2	+22.4		
Champaign-Urbana	$ 2,486	47.8	$ 630	70.5[b]	5.3[b]
Percentage change from May 1978	-51.4	+9.1	-5.8		
Percentage change from June 1977	-42.8	-7.5	+0.8		
Danville	$ 732	43.6	$ 225	19.2	8.1
Percentage change from May 1978	-75.9	+9.2	+5.6		
Percentage change from June 1977	-29.3	+1.6	-34.5		
Decatur	$ 2,884	124.6	$ 491	57.4[b]	6.6[b]
Percentage change from May 1978	-0.4	+12.2	+11.8		
Percentage change from June 1977	-50.4	+12.5	-41.4		
Galesburg	$ 688	31.9[c]	$ 148	16.4	7.3
Percentage change from May 1978	-41.9	+13.9	+4.9		
Percentage change from June 1977	-57.1	-9.1	+0.6		
Peoria	$ 8,405	193.6	$ 1,260	168.7[b]	5.3[b]
Percentage change from May 1978	+75.7	+9.5	+2.7		
Percentage change from June 1977	-22.1	+2.5	+9.6		
Quincy	$ 1,082	38.7	$ 227	43.5	6.9
Percentage change from May 1978	+33.5	+6.3	+9.6		
Percentage change from June 1977	+66.4	-6.0	+12.9		
Springfield	$ 4,147	127.6	$ 1,251	93.5[b]	5.7[b]
Percentage change from May 1978	+5.5	+19.6	-31.[illegible]		
Percentage change from June 1977	-23.3	+6.3	-44.[illegible]		
SOUTHERN ILLINOIS					
East St. Louis	$ 170	26.5	$ 193	22.[illegible]	10.1
Percentage change from May 1978	-45.1	+11.3	+31.2		
Percentage change from June 1977	-24.[illegible]	-3.2	[illegible]		
Alton	$ 866	76.9	$ 143	15.2	7.2
Percentage change from May 1978	+265.4	+4.6	+31.1		
Percentage change from June 1977	+448.1	+1.0	+20.1		
Belleville	$ 930	26.3	$ 489	19.[illegible]	[illegible]
Percentage change from May 1978	+30.6	+27.0	+19.5		
Percentage change from June 1977	+65.1	-0.7	+117.3		
Carbondale-Murphysboro	$ 542	32.2	$ 316	26.[illegible]	[illegible]
Percentage change from May 1978	-7.6	+14.5	+9.3		
Percentage change from June 1977	-28.7	+4.2	+24.5		

[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local post office reports; accounting period ending 16 June 1978. [4]Illinois Department of Labor; preliminary.

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory.
[d]Includes East Moline.

Overview of Demographic Trends Shaping the Nation's Future

PETER A. MORRISON

Demographic shifts include changes in the size, structure, and spatial distribution of the US population, and the composition of the households and families into which the population is grouped. Taken together, they are altering — often drastically — the fortunes of particular places and regions. During the past two decades, major shifts have occurred in long-term demographic patterns of fertility and migration. Demographic analysis can draw attention to emerging and approaching issues associated with these shifts and set the stage for public debate on timely actions for dealing with those issues.

Overview of National Demographic Changes

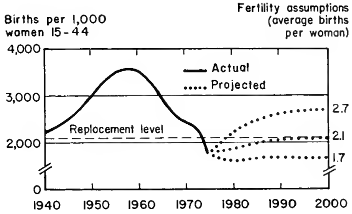
Slowing Rate of Population Growth. Toward the end of the 1960s, the US population entered a period of transition to zero growth. Nationally, population increase averaged 2.8 million each year between 1955 and 1965. Since then, average annual increase has diminished to 1.9 million (less since 1971).

Change in American fertility has been the key factor in this slowing of population growth. The fertility rate declined sharply and now stands barely above its historic low (Chart 1).

The contemporary trend in fertility reflects an interaction between the widespread use of more effective methods of contraception and changing attitudes toward childbearing:

(1) Contraceptive practice has been modernized over the past 10 years. The increased use of highly reliable means of contraception, along with the availability of legal abortion as a backup method, has afforded couples virtually complete control over their fertility and has reduced unwanted childbearing. In 1975, three out of every four married couples using contraception had either been sterilized or were using the pill or the IUD. Ten years earlier, just a little more than one-third were using these reliable methods.

Chart 1. US Total Fertility Rate: Past and Projected



(2) There has been a downward shift in fertility norms — at least among young adults, large families have become the exception. Nationally in 1976, almost 75 percent of married women 18 to 24 years old expected to have no more than two children, as contrasted with about 45 percent in 1967. In short, the population has settled on the two-child family as the desired norm. Intentional childlessness has increased somewhat in recent years (although there are strong indications that childbearing is not going out of style).

(3) There has been a postponement of childbearing among married couples. Many wives have embarked on careers, and many couples have put off having their first child or additional children until their economic situation improves. When childbearing is "rescheduled" in this way, the birthrate, of course, drops, and it can go back up equally fast when circumstances change.

Although the growth of the US population has slowed considerably, the growth in the number of US households has not. New households are forming at nearly three times the rate that the population is grow-

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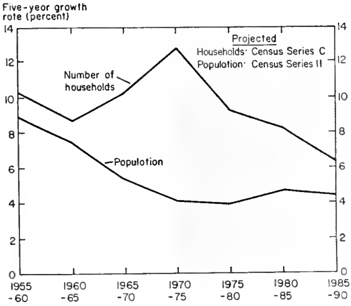
ing (Chart 2).[1] This dissimilarity in population and household growth trajectories (which is likely to continue for at least another decade) can be a source of confusion in supposedly "declining" cities.[2]

While a number of uncertainties cloud the outlook for national population growth, they are well defined uncertainties, and there is a substantial body of evidence on which to base an informed judgment about future fertility trends. For now, the most reasonable conditional forecast in light of current birth-expectations data is the Census Bureau's projection series II, which assumes 2.1 births per woman. That projection indicates a slight rise to an annual population increase of 2.2 million during most of the 1980s. Thereafter, the annual increase moderates to a range of 1.5 million to 2.0 million during the 1990s and drifts lower in later years (see Chart 3).

Chart 2. Contrasting Growth Rates: Population vs. Households



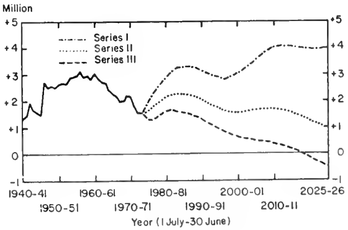
Events can upset forecasts, of course. Since fertility is uncertain, future growth rates may be higher or lower than those in the "best guess" series II projection. For that reason, the Census Bureau also compiled projection series I (assuming fertility of 2.7 births per woman)and projection series III (fertility of 1.7 births per woman). These projections, also shown in Chart 3, bracket what most demographers would regard as a reasonable range of future possibilities. In my judgment, (1) the long-term trend of future fertility (and hence population growth through natural increase) is very unlikely to rise above the level depicted in series I; (2) it seems plausible, on the other hand, that fertility could fall below the level depicted in series III; (3) annual birthrates are almost certain to become more volatile, as couples exercise more effective control over whether and when to have children in response to economic conditions.

The significance of changing fertility patterns, of course, extends beyond the simple arithmetic of a slowing rate of population growth. For one thing, the composition of families and the life cycle through which they pass are being transformed. Also, as fertility has declined, public attention is focused increasingly on *who* bears children today. Adolescent childbearing has become a major concern because (1) teenagers account for a sizable fraction of all US births (18 percent in 1976), (2) many of their pregnancies are unwanted and avoidable, and (3) "kids with kids" saddle society with considerable long-term costs.

Changes in fertility also have transformed the population's age structure, affecting age-related services and institutions. Lower fertility means, among other things, lower school enrollments, and eventually, larger social security payments. As a basic determinant of the population's age structure, shifts in fertility may have intense and long-lasting social, fiscal, and political effects.

Pressures of a Changing Age Profile. A generally growing population is, of course, one major driving force behind expanding demands for public services and rising revenues to support those services. But many service demands grow — or shrink — in proportion to the population in specific age ranges. Police and prisons had to expand in the 1960s to cope with the wave of young people passing through the ages of peak criminal activity; public health care facilities expand to accommodate the elderly and the poor; and, of course, elementary school enrollments have begun to fall off as the population under 10 has shrunk. Similarly, public revenues are partly a function of the proportion of persons in the working ages.

Chart 3. Estimates and Projections of Annual Population Change, 1940 to 2025



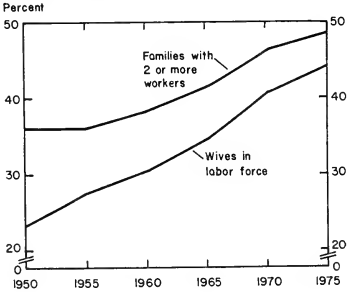
[1] The current and impending surge of household formations is attributable mostly to the large numbers of young adults born during the postwar baby boom, who are now passing through the prime household-forming ages (roughly speaking, 20 to 30). Other concurrent trends lend further impetus to this surge: (1) the tendency for unmarried young adults (whose ranks are increasing) to set up independent households after leaving their parental homes but before marrying and forming their own families; and (2) the increase in the number of "survivor" households (mostly elderly widows) who choose to occupy separate living quarters after their children have formed their own families.

[2] Depending on which measure one chooses, a city like South Bend, Indiana, can be characterized as either growing or declining. Take households as the unit of measure, and South Bend has grown roughly 1 percent annually since 1970; count people, and it has declined about 1 percent annually.

The rate at which a population is changing at any given time may vary widely from one age group to another. Between 1970 and 1977, the total US population growth rate (6 percent) concealed considerable unevenness of change. For example, (1) the population aged 5 to 13 (students) declined 12 percent; (2) the population 25 to 34 (prospective homeowners) increased 32 percent; and (3) the population 65 and older (heavy consumers of health care) increased 18 percent. These different rates of growth for different age groups reflect past fluctuations in fertility that occurred during the economic depression of the 1930s, the baby boom following the second World War, and the sudden drop in the fertility rate in the late 1960s. Each major rise and fall has left its imprint on the population's age profile.

Peristalsis — the way a python swallows a pig — is an apt metaphor for how the US has absorbed the impact of these swings in fertility. The many children born after World War II crowded the schools during the next decade and began forming their own households in the late 1960s. From birth to maturity they have overcrowded maternity wards, then schools, then juvenile justice institutions, and then the housing market.

Chart 4. Families with Working Wives and Two Paychecks



The concentration of population in certain ages presages a number of unavoidable changes that will affect not only school and college enrollments and the demand for particular kinds of dwelling units suited to specific age groups, but also various redistribution programs such as social security.

Rise in Two-Worker Families. Intertwined with the trend toward smaller families has been a sharp increase in the percentage of wives who earn income and in the closely related percentage of two-paycheck families (Chart 4).

In 1977, 46 percent of wives were in the labor force, compared with only 24 percent in 1950. Among today's working-age men, by comparison, 78 percent are in the labor force — about 10 percentage points *lower* than in 1950.[3] The money contributions of working wives are of crucial importance where they raise family income above minimal levels. In 1974, only 4 percent of all husband-wife families had incomes below $5,000 when the wife was a worker (compared with 13 percent when she was not). Among all wives who worked in 1974, the median contribution was more than one-fourth of the total family income.

In addition to increasing their labor force participation, wives are also ordering their careers as mothers and income earners quite differently. They are starting work earlier in life and continuing to work after children arrive. Furthermore, their attachment to the labor force is more permanent. Compared with their counterparts a decade or more ago, many more of today's young wives are likely to be working in their older years, and will more often hold full-time jobs.

Among college women, there is a growing disinclination to confine their activities to home and family. Annual national surveys show that far fewer first-year college women endorse that traditional role now than they did even in the recent past (only 20 percent in 1977 compared with 44 percent in 1967). First-year college men show a similar decline (from 67 percent to 36 percent). These preferences may be reflected in the rapid increase in the representation of women in higher-paying professional occupations. For example, women now account for 1 of every 8 physicians, compared with 1 of every 18 in 1962. The participation of women in first-professional degree programs also has risen sharply. In law, for example, the proportion of women among total enrollment rose from 7 percent to 23 percent between 1969–70 and 1975–76.

In sum, families with at least two workers are the mode today, and in my judgment this trend will advance considerably further in the years ahead. Smaller families and the changing economic position of wives will reinforce the new working patterns of women. The future work lives of men and women will come to resemble each other more and more, both in terms of occupational distribution and time spent in the labor force. The result will be increasing numbers of multiworker families, each with higher family income, in the years ahead.

Changing Geographic Distribution of Population

Changes in migration patterns, in conjunction with the falloff in the birthrate, are altering the national landscape of population growth and decline. Like wind drifting snow, they have created new shapes, obliterated old ones, and in some places exposed what lies beneath.

Metropolitan Areas and Their Central Cities. The sharp decline in births has throttled back the rate of population growth and in the process revealed migratory comings and goings as the principal determinant of local growth and decline in many places. Since 1970, 42 of

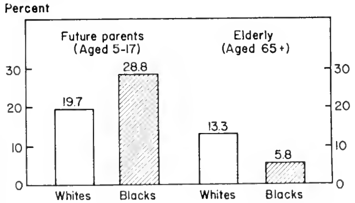
[3] Although the labor force participation rates of all women have increased markedly, the increase has been especially noteworthy among mothers, 49 percent of whom were in the labor force in 1976 compared with 30 percent in 1960.

the nation's 259 standard metropolitan statistical areas (SMSAs) have failed to register any significant population growth. Three-fourths of the 42 are in the northeast quadrant of the country. The failure to grow is due partly to the low birthrate, but mostly to the excess of departing migrants over arriving ones. As the cities' magnetism has waned, population has stopped growing or has begun to decline. Although this situation is not the prelude to economic stagnation that it is widely thought to be, it does severely strain traditional mechanisms of municipal finance.[4]

Within metropolitan areas, the outflow of population from declining cities continues, and with a predictable order of march: affluent whites go first; the poor, the elderly, and minorities (if they go) go last. In the interim, the population that is left behind tends to grow more disadvantaged and, disproportionately, to have special needs. Problems of dependency and poverty, which are not exclusively problems *of* these shrinking cities, accumulate *within* them and clamor for solutions.

The most obvious and troublesome facet of this process is metropolitan racial separation. Some blacks are moving into the suburbs, to be sure, but most blacks remain concentrated in large central cities; and as the cities' populations shrink, the relative concentration of blacks intensifies.

Chart 5. Age Composition of Whites and Blacks in Large Cities



Nationally, blacks make up about 24 percent of central-city dwellers, and the percentage has continued to rise in this decade. Part of the rise, as just noted, reflects the outflow of whites from central cities. But demographic differences between the black and white populations in large cities are also pushing this percentage higher, perpetuating the existing pattern of racial separation within metropolitan areas and producing a kind of "no-fault" segregation (Chart 5).

This perpetuation comes about partly because the black population has comparatively more future parents and, therefore, intrinsically greater potential for growth in the places where blacks now live. In large central cities, fully 29 percent of blacks are between 5 and 17 years of age, compared with only 20 percent of the comparable white population, and whereas 13 percent of whites are 65 and older, only 6 percent of blacks fall within this age range.

These contrasting structural characteristics of the two populations mean that blacks, already disproportionately concentrated in the central cities of large metropolitan areas, will become even more so in the absence of other changes. That is, even if everybody suddenly stopped migrating, the black population would continue to grow faster than the white population, intensifying racial separation where it already exists.

Inevitably, the Congress must reckon with the long-term implications of powerful demographic forces that perpetuate metropolitan racial separation.

Are we likely to see a revival of the central cities through the return of the middle class, which might begin to solve these problems in a "natural" fashion? The possibility that the typical big city may begin to attract substantial numbers of well-heeled newcomers cannot be ruled out. Such gentrification, as it is labeled, is obviously under way in certain places, most notably within the District of Columbia. It is also said to be happening in Boston's South End, Brooklyn's Park Slope section, Queens Village in Philadelphia, and Detroit's Renaissance Center. But although some neighborhoods have revived in some cities, it would be hasty to regard these isolated success stories as the forerunners of a widespread regeneration trend involving a "back-to-the-cities" movement. What sparse evidence there is fails to support the persistent rumors of such regeneration. Substantial urban resettlement occurs, it seems, only where the central city economy offers high-paying white-collar jobs to large and growing numbers of young workers. The majority of central cities, in my judgment, will continue to conform more closely to the "downward spiral" than to the "regeneration" model, because they do not possess the kind of base that would induce regeneration.

Nonmetropolitan Areas. The counterpoise to this trend toward metropolitan decline is the "rural renaissance" — the revival or acceleration of population growth in small cities and towns, including those remote from metropolitan areas. These small, once stable communities are ill equipped to deal with sudden population growth — they lack the full array of legal and institutional structures needed.

The pattern of growth in nonmetropolitan areas is more balanced now than before. Many previously lagging areas have revived while other previously growing areas have stabilized. Nearly two-thirds of all nonmetropolitan counties have gained migrants in the 1970s, compared with only one-fourth in the 1960s and one-tenth in the 1950s.

The revival of net migration into the nonmetropolitan sector is not restricted to areas with strong metropolitan commuting ties or those that are urbanized. The revival is especially noticeable for counties with the *least* commuting and those that are *entirely rural* and not adjacent to an SMSA. What is happening in the nonmetropolitan sector, therefore, cannot be explained away semantically

[4] The waning attractiveness of large urban centers is not unique to the US. Japan, Sweden, Denmark, Norway, and other industrially advanced nations have begun to register the same phenomenon in the 1970s.

as just more metropolitan sprawl or "spillover," for it is affecting distinctly remote and totally rural nonmetropolitan areas as well as those adjacent to metropolitan centers.

Regional Shifts. The changing directions of internal migration during the 1970s signal, and at the same time reinforce, new patterns in the regional distribution of economic vitality. These shifts are responsible for a variety of new regional conflicts of interest as well as for the new regional political coalitions whose power is starting to be felt.

The fortunes of different regions present a complex picture of growth and decline, with frequent marked breaks from past patterns. The shift in migration, together with moderating natural increase, has determined where the symptoms of national decline first appear.

The most striking illustration is the contrasting fortunes of the Northeast and the South (as defined by the Bureau of the Census). These two regions demonstrate how recent shifts in net migration, together with the overall drop in the birthrate, have produced sharply diverging rates of population growth.

Chart 6. Population Changes in Northeast and South Before and After 1970

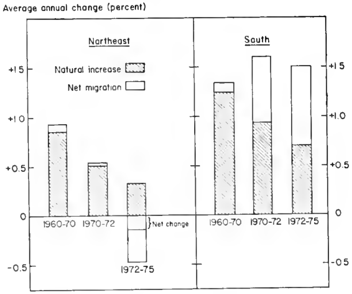


Chart 6 shows the average annual rates of population change in both regions for the 1960s, the early 1970s, and the mid-1970s. Population change is divided into its two demographic components: natural increase (the excess of births over deaths) and net migration. As the chart shows, the rate of population growth has declined sharply in the Northeast but not in the South. The losses of the Northeast are due to both a downturn in net migration and the falloff in the birthrate. Prior to 1972, the Northeast had a nominal migration gain. After 1972, net migration reversed and turned into a sizable rate of out-migration. The Northeast now registers negative change in population, because out-migration more than offsets natural increase.

In the South, the population growth rate during the 1970s has not differed appreciably from that of the 1960s. The *source* of this growth has changed, however: the net migration component is substantially greater than it was. In other words, a rising influx of newcomers has sustained the South's population growth as natural increase has waned. Although babies have become scarcer, the South has managed to attract migrants; the Northeast is running out of both.

All in all, the South is growing very little faster than it did in the 1960s, and its lead over the Northeast is not anything new — the South's growth rate has surpassed that of the Northeast for at least 15 years. But the new importance of migration has altered the political complexion of the South. After all, migrants, unlike babies, tend to be of voting age. The crux of interest, then, lies not so much in gross figures on the national population slowdown as in the political, economic, and cultural changes that regions undergo as migrants move among them.

Implications for Public Policy

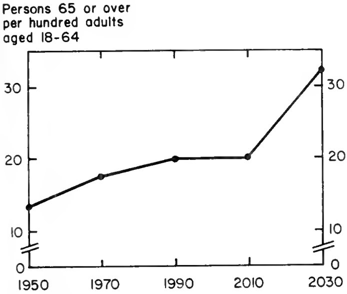
The implications of these demographic changes are exceedingly broad. Rather than attempting an exhaustive inventory, let me illustrate two kinds of demographic impacts: (1) demographic change modifies the groups of recipients and donors involved in several important kinds of redistribution, and (2) demographic change undermines long-standing economic and political balances in the distribution of income, wealth, and employment growth.

Demographic Change and Redistribution Across Generations. The tribulations of social security (and of other government retirement programs) illustrate how demographic change can destabilize public programs — in this case, threatening to crack the cornerstone of intergenerational transfer in our society. Some states and localities, afflicted by the shift in the population's age composition, have been forced to draw on general tax revenues to finance their retirement programs. In doing so, they create what are, in effect, new intergenerational transfer programs.

Recognition of the problem was surprisingly long in coming, all things considered. The problem originated quietly but powerfully during the late 1940s and 1950s as sharply rising birthrates expanded the ranks of future recipients, and gradually declining death rates kept current recipients alive — and receiving — longer. That expansion encouraged planners to make the comfortable assumption that fertility would *remain* moderately high. (After all, it would take nothing short of a baby-boom-size workforce at the end of the century to generate enough revenues to support the post–World War II baby-boom generation when *they* began to reach retirement age.) That assumption went out the window, of course, with the onset of the "baby bust" in the late 1960s. It was not until the early 1970s that the public, already hypersensitive to inflation and rising prices, came to recognize the alarming problems in store for social security.

The fundamental demographic change can be traced in the elderly dependency ratio (Chart 7). This ratio

Chart 7. Elderly Dependency Ratio, 1950–2030[a]



[a] Census series III projection after 1977.

shows the size of the elderly population (65 years and over) in relation to the working age population (ages 18 to 64) — expressed as the number of elderly dependents per hundred working age adults. The ratio has risen steadily over recent decades; in the absence of another baby boom or a surge of immigration, it is projected to climb from 17 per hundred in 1970 to 32 per hundred by 2030.

To some extent, rising rates of female labor force participation will offset the financial impact of this rising dependency ratio. Nonetheless, the message conveyed in these figures is clear: Demographic changes can be expected to undermine the long-standing political balance supporting intergenerational transfer. This gradually deteriorating demographic context is a formidable and far-reaching influence, separate from other more immediate threats to the social security system's financial stability. (The immediate "crisis" of the mid-1970s was precipitated by a combination of inflation and the manner in which social security benefits and contributions were coupled.)

Social security is a program whose future script was largely written when Americans began to shun large families and settled on the two-child family as a norm (with some families deciding to have only one child or none at all). The program's future is disturbing to contemplate. Barring a major war, the number of future social security recipients will surely rise. With low birthrates, however, the number of prospective donors already has shrunk, and may shrink even further depending on how few children *contemporary* teenagers decide to have.

Demographic Change and the Distribution of Income, Wealth, and Employment Growth. Migration shifts in both metropolitan and nonmetropolitan sectors have begun to reshuffle traditional power bases across the nation. These changes have been consolidated in new regional alliances — the Coalition of Northeast Governors, the Southern Growth Policies Board, and others — and will become more apparent in 1982 with congressional reapportionment. The shifts are also posing common kinds of problems in specific places:

(1) Head-count concerns. When federal largess is distributed among localities and regions — in such forms as revenue sharing, community assistance, vocational education, LEAA funding to states, and the like — the formulas for distributing it typically give weight to the number of inhabitants an area claims. Regions unable to boast more people (or worse, unable to claim even as many as they had last year) will lose funds, even though they may require *more* federal assistance for that very reason.

(2) Concerns about labor force quality. In recomposing a region's population, net migration may alter its labor pool, augmenting or depleting its stock of human capital. Skilled workers may depart from an area, to be replaced by less skilled in-migrants; young adults educated at one region's expense may move themselves, and that investment, to another region.

(3) Concerns about dependency. Some segments of the population (for example, those on public assistance) are recognizably a public burden, and others (such as uneducated rural-to-urban migrants) are thought to be. Their accumulation in a place, whether through in-migration on their own part or through out-migration by other people, can scarcely be a matter for local indifference because of the real or perceived costs they impose.

(4) Concern over undocumented aliens. This issue figures prominently in California, Texas, New York, and a few other states to which many aliens make their way. Illegal aliens used to stay close to the border, often in rural areas; but substantial numbers of them are now scattered throughout the nation. There is much disagreement about what effects they have. Some observers insist that alien Mexican workers, for example, take jobs that unemployed Americans or legal migrants could have filled, and that illegal aliens overburden social services of all kinds, taking more in the form of social welfare services than they contribute in taxes. Although evidence is scarce, these allegations have nevertheless gained wide currency.

(5) Local "shrinking pains." Newly declining areas are discovering that decline is not a graceful process. "Shrinking pains" have become commonplace, and not in central cities alone. Nationwide, about one-sixth of all metropolitan areas are losing population, and one-third of metropolitan residents live in these areas of population decline. For central cities, especially the large ones and those in the Northeast, the problems are far worse.

These nongrowing areas will continue to face problems of residential and productive obsolescence, most notably vacant and abandoned housing, underused schools, outmoded public facilities, and an aging inventory of stores, offices, and factories. Selective out-migration will add to the burden of dependency that elderly and low-income citizens impose on a locality by lingering on after younger and more mobile people have left. These forces will worsen the fiscal situation of declining jurisdictions in an obvious fashion: Tax bases will shrink, while service demands may even grow.

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(6) Newly experienced growth. While some areas resent the problems that migrants generate when they leave, other areas equally resent the problems that arriving migrants cause: congestion, sprawl, and support costs. Local officials often feel frustrated at their inability to dampen the external forces that attract migrants. They have, therefore, attempted to deal with the effects instead, by instituting local population ceiling ordinances (as in Boulder, Colorado; Petaluma, California; and elsewhere); proposing federal legislation to control the influx of migrants (as the governor of Hawaii did last year); and attempting to withdraw unilaterally from federal welfare programs (as in Plumas County, California).

Conclusions

The demographic processes that underlie the shifts I have described are understood well enough that it is possible to foresee some of their long-range implications. Yet policymakers are not receiving the full benefit of demographic analysis; demography seems to be only partly understood and poorly used by those who make policy decisions. There is room for improvement.

Demographic change proceeds slowly but on a massive scale. The problems it engenders are complex, and it is not easy to promote public awareness of their existence and of why public action is needed. The monitoring of demographic trends, periodic analyses of *what* has changed and what the changes *mean,* and other forms of demographic reporting build public recognition and help pave the way for Congress to act. The debate can then become a little more profound and the decisions a little wiser.

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Income Growth Rate Unchanged in 1976

RUTH A. BIRDZELL

Illinois residents received an estimated $82.1 billion in personal income in 1976, an increase of 9 percent from 1975. The rate of change was the same as in the previous year, but fell slightly behind the 10 or 11 percent growth in 1973 and 1974. The 9 percent rate put Illinois among the slower-growing states: only eight other states showed lower percentage advances (one loss) and nine other states had the same rate of gain. Thus about two-thirds of the states grew at a faster rate and contributed to the 10 percent average national expansion in personal income.

Comparing Illinois with other wealthy industrial states shows that Illinois had a larger increase than New York and matched Pennsylvania, but fell behind the growth rates of Michigan, Ohio, Texas, and California.

Personal income on a per capita basis, at $7,332 in 1976, continued to run well ahead of the national average of $6,403. The 1975–76 advance in per capita income was a little larger than the gain from 1974 to 1975 and reflected a small decline in population as well as somewhat higher total income.

Table 1 (pages 4 and 5) shows total personal income for 1971 through 1976 for Illinois, the 10 standard metropolitan statistical areas that lie wholly or partly in Illinois, and the 102 counties of the State. Table 2 (pages 6–8) shows per capita personal income; and Table 3 (pages 9–11) shows total labor and proprietors' income by place of work and by major industries.

Comparisons with the Nation

For many years Illinois has been considered almost a mirror image, on a smaller scale, of the United States economy. In the past couple of years, however, there have been some noticeable divergences. For example, in the US, labor and proprietors' income from farming dropped in 1974, 1975, and 1976. The drop in 1975 was about a third of that in 1976, which in turn was smaller than the 1974 decline. By contrast, farm-related income in Illinois dropped in 1974, swung sharply upward in 1975, and dropped substantially again in 1976. Thus, 1975 was considerably kinder to farmers in Illinois than it was elsewhere.

Only five counties failed to share in the 1975 upswing in farm income — Carroll, Clark, Crawford, Cumberland, and Johnson; 46 counties had increases in farm income of at least 50 percent. That big surge accentuated the 1976 drop for Illinois, 26.5 percent compared with 12.8 percent for the nation. Only two counties, Hardin and Pope, did not suffer a sizable decline in farm-generated income in 1976. Nonetheless, the 1973–76 shift in farm income for Illinois was −16 percent, compared with −30 percent for the US.

With the exception of 1974, increases in nonfarm income in Illinois have lagged behind those in the US throughout the early 1970s. In 1976 the gain in Illinois was slightly more than 8 percent compared with one of nearly 11 percent for the nation. Slower growth in the private nonfarm sector was the most important factor by far. This part of the Illinois economy accounted for 84 percent of total labor and proprietors' income by place of work and 86 percent of nonfarm income in 1976. The growth rate in Illinois that year was only three-fourths of that in the US. Illinois growth rates lagged behind US rates in most of the main sectors — mining, construction, transportation and public utilities, trade, finance-insurance-real estate, and services — and most particularly in manufacturing, the biggest sector of all. Manufacturing in Illinois accounted for nearly 30 percent of labor and proprietors' income by place of work in 1976. Gains in income from that source have generally fallen short of the national average in this decade and in 1976 dropped to about three-fifths of the US rate.

The difficulty lay mainly in the durables section, which accounted for two-thirds of income from manufacturing activity. The rate of advance in that segment was less than half the national rate. In the smaller nondurables component, the rate of growth in Illinois was

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roughly three-fourths of the US rate. In 1975, a year that saw the end of the recession and the start of the recovery, Illinois actually suffered a decrease in income from manufacturing whereas the nation showed a fractional advance. The drop in Illinois occurred in the durables sector. Where it used to be considered that Illinois, with its concentration in civilian goods, was not subject to the ups and downs of defense procurement as some other states have been, it now has to be wondered if the State is losing ground even in the civilian markets.

The state's rate of growth for income from manufacturing in 1976 was 7.5 percent (9.5 percent for nondurables, 6.6 percent for durables). Of 102 counties, 14 had less income from manufacturing in 1976 than they had in 1975. Two of the 14 were metropolitan counties but only Boone had a large manufacturing component (two-thirds of its income). In addition, 22 other counties saw increases in the amount of income earned in manufacturing which were less than the state average. Most notable among those counties were Cook (with a gain of 7 percent, just under average), Kankakee, Will, McLean, Peoria, Tazewell, Champaign, Macon, and St. Clair, all SMSA (and industrial) counties. Other SMSA counties had increases ranging from 8 percent to 14 percent.

It might have been expected that transfer payments as a percentage of personal income by place of residence would drop in 1976 as the recovery progressed. In the US as a whole that percentage dropped only from 14.2 to 14.0. In Illinois the percentage rose from 12.0 to 12.4, to $10.1 billion. In only four counties were transfer payments a smaller part of personal income in 1976 than they had been in 1975; in one county the share was the same. In 44 counties the share of transfer payments in personal income rose only a fraction of a percentage point, but in 42 counties they were up by 1.0 to 1.9 points, in 10 counties they were up by 2.0 to 2.9 points, and in one county the part of income from transfers rose by 3 points.

Some of the wealthy northeastern suburban counties owed the smallest share of their income to transfers and several counties in the southeast the largest share. In the northeastern counties, transfers were up to approximately 6 percent of the total; in the rural southeast, they made up 24 percent.

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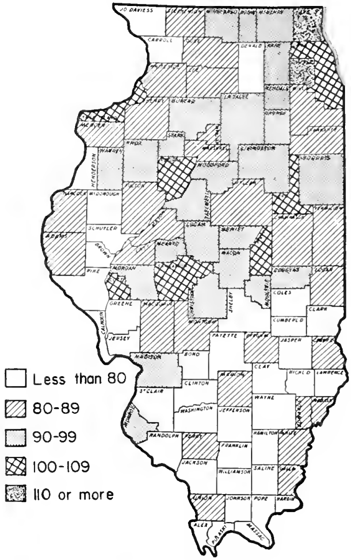
County Incomes as Percentage of State Average, 1976



Source: Derived from US Department of Commerce data.

Per Capita Personal Income

For a more accurate view of economic well-being, per capita personal income is useful. Such income advanced in Illinois in 1976 by nearly 9 percent, slightly less than the US rate. In the previous three years, the Illinois gain had been well ahead of the national advance.

After two years of loss or at least no increase in purchasing power, per capita income for both the US and Illinois showed a real advance in 1976. Measured either by the consumer price index (CPI) or the implicit price deflator for consumption spending (IPD), real per capita income rose about 3 or 4 percent (see tabulation).

	Increase in per capita personal income		Increase in price measures	
	US	ILL	CPI	IPD
1971–72	8.7%	7.0%	3.3%	3.5%
1972–73	10.8	11.6	6.2	5.5
1973–74	9.0	9.7	11.0	10.8
1974–75	8.0	8.4	9.1	8.0
1975–76	9.2	8.9	5.8	5.3

Among the counties of Illinois, Cook, with a gain of 9.0 percent in per capita personal income, and Du Page, with an increase of 9.3 percent, dominated the state picture. Of the other 100 counties, 30 suffered a loss in dollars of income and an additional 42 showed gains of less than 5 percent. Thus, nearly three-fourths of the counties of the State showed a loss of purchasing power in 1976. Four of the remaining counties — Madison, Hardin, Williamson, and Pope — had increases of more than 10 percent; 26 counties had gains of 5.0 percent to 9.9 percent.

Per Capita Income Related to US and State

How all these changes left per capita incomes in Illinois relative to the US average can be seen in Table 3. We could report last year that more than half of the counties of Illinois had per capita incomes in 1975 that were greater than the national average. For 1976 that figure fell to 41. Ten counties still had incomes that were less than 80 percent of the national average, compared with 11 in 1975.

By and large, two trends are noticeable in per capita personal income in the five-year period between 1971 and 1976. (1) Ten counties in the northeastern part of the State, all of them urban and industrial and most of them with per capita personal incomes well above the national average, lost ground during the period. Some counties in the area lost as many as 6 or 7 points from their relatives. Du Page and Cook counties, two heavyweights in incomes received, each lost 3 points relative to the US average. (2) Most of the nonmetropolitan counties of the State gained a few points relative to the national average. Gains occurred especially in the western and southern parts of the State, where incomes generally lag well behind the national level.

The accompanying map, which shows county per capita incomes related to the state average, shows how many of the western and southern counties trail the rest of the State. It also shows clearly the weight Cook County carries. Cook was one of only nine counties in Illinois in 1976 with a per capita personal income above the state average. With personal income equal to 107 percent of the average and with the help of five other metropolitan counties, two prosperous farm counties, and one small rural county, it balanced 93 counties with below-average incomes.

Professor Birdzell wishes to thank Jerrold Goldblatt, research assistant in the Bureau of Economic and Business Research, for his assistance in preparing the tables which accompany this article.

The Data

Each year the Bureau of Economic Analysis of the US Department of Commerce makes available to the University of Illinois Bureau of Economic and Business Research its estimates of personal income for the counties of the State. The reports give data for the second year before and data for several earlier years. Thus, the recently received 1978 reports include the income data for 1971 through 1976. The table on page 12 presents the report for one county.

The BEA bases its estimates primarily on administrative records of federal and state government programs, with additional information coming from various censuses or from nongovernment sources. The most important sources of administrative record information are the state unemployment insurance programs, the Social Security Administration insurance programs, and the Treasury Department's tax programs. Census data include surveys that are part of the Censuses of Agriculture and Population.

Personal income is defined as "current income of residents of an area from all sources. It is measured after deduction of personal contributions to social security, government retirement, and other social insurance programs but before deduction of income and other personal taxes. It includes income received from business, Federal and State and local governments, households and institutions, and foreign governments. It consists of wages and salaries (in cash and in kind, including tips and bonuses as well as contractual compensation), various types of supplementary earnings termed other labor income (the largest item being employer contributions to private pension, health and welfare funds), the net incomes of owners of unincorporated businesses (farm and nonfarm with the latter including the incomes of independent professionals), net rental income, royalties, dividends, interest, and government and business transfer payments (consisting in general of disbursements to persons for which no services are rendered currently, such as unemployment benefits, social security payments, medicare benefits, retirement pay of governmental programs, and welfare and relief payments."

Personal income data are available for Illinois and the counties of the State for $10 a set. These data correspond to those shown on page 12 for Scott County. Inquiries may be addressed to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801.

TABLE 1 TOTAL PERSONAL INCOME, ILLINOIS, SMSA S, AND COUNTIES, 1971-76
(MILLIONS OF DOLLARS)

SMSA OR COUNTY	1971*	1972*	1973*	1974*	1975#	1976#
ILLINOIS	53030.1	56928.0	63323.5	69359.5	75786.1	81509.1
BLOOMINGTON-NORMAL, IL	447.6	478.1	562.7	629.1	729.7	748.5
CHAMPAIGN-URBANA-RANTOUL, IL	638.3	680.0	772.4	844.7	940.0	988.9
CHICAGO, IL	36365.5	38904.1	42585.6	46676.2	50103.1	54541.7
DAVENPORT-ROCK ISLAND-MOLINE	1552.3	1705.0	1975.2	2230.8	2443.5	2662.1
DECATUR, IL	557.7	598.6	668.4	746.1	820.2	883.5
KANKAKEE, IL	420.6	448.1	508.9	544.8	599.2	619.4
PEORIA, IL	1598.4	1703.0	1942.1	2204.9	2510.4	2666.5
ROCKFORD, IL	1181.9	1292.0	1451.5	1575.2	1663.6	1816.0
ST. LOUIS, MO-IL	10672.1	11383.1	12421.4	13499.2	14635.6	16119.9
SPRINGFIELD, IL	851.3	910.2	1009.3	1125.1	1290.1	1357.4
ADAMS	294.8	323.7	375.4	388.1	435.5	452.4
ALEXANDER	32.9	33.8	35.4	41.9	48.1	53.6
BOND	46.0	51.2	60.9	63.5	78.2	79.9
BOONE	118.8	124.3	141.3	151.2	173.1	180.5
BROWN	18.7	21.8	26.2	25.8	32.9	30.7
BUREAU	149.0	156.0	190.4	204.9	244.1	245.8
CALHOUN	16.1	17.8	22.1	23.1	29.4	28.8
CARROLL	78.2	84.6	93.1	98.2	99.5	100.2
CASS	57.0	62.7	74.1	79.1	88.5	87.7
CHAMPAIGN	638.3	680.0	772.4	844.7	940.0	988.9
CHRISTIAN	147.6	161.4	196.0	210.9	252.3	252.7
CLARK	54.7	63.5	72.1	76.8	83.7	87.7
CLAY	41.7	50.7	56.4	59.9	67.1	69.8
CLINTON	98.6	104.5	123.3	132.3	152.3	157.2
COLES	173.0	192.1	216.4	238.7	269.0	281.4
COOK	28511.7	30298.7	32828.4	35942.3	38370.1	41611.9
CRAWFORD	70.2	79.0	91.0	103.8	114.1	123.0
CUMBERLAND	27.9	34.6	39.1	42.0	45.0	47.1
DE KALB	265.4	288.6	321.4	365.5	389.9	405.6
DE WITT	67.6	69.4	87.4	97.3	115.9	115.0
DOUGLAS	77.3	85.9	104.0	112.4	138.3	137.3
DU PAGE	2879.8	3160.9	3637.5	4020.3	4395.6	4863.8
EDGAR	84.8	96.5	114.5	118.0	140.2	136.7
EDWARDS	22.9	27.2	36.7	36.8	48.4	49.6
EFFINGHAM	84.7	99.4	114.4	128.6	151.6	164.8
FAYETTE	56.8	68.8	77.9	83.3	96.6	101.8
FORD	73.0	72.6	96.4	98.3	119.8	117.0
FRANKLIN	125.1	142.0	165.0	177.4	204.1	224.6
FULTON	159.1	176.8	210.5	223.0	265.6	277.0
GALLATIN	21.0	24.0	24.3	32.2	42.0	40.9
GREENE	48.4	53.0	69.8	80.2	92.8	89.9
GRUNDY	124.9	130.5	151.6	169.3	188.8	200.5
HAMILTON	22.1	24.9	32.7	36.8	43.7	43.0
HANCOCK	81.0	87.1	105.6	113.9	135.0	135.2
HARDIN	14.0	15.5	15.9	18.0	21.1	23.9
HENDERSON	29.0	32.3	43.1	40.6	54.0	48.5
HENRY	213.7	239.8	285.2	305.7	346.5	361.5
IROQUOIS	139.4	142.3	186.2	199.6	239.9	230.3
JACKSON	177.7	194.7	217.6	236.5	274.7	2 7.2
JASPER	31.6	40.2	47.3	48.0	58.2	60.4
JEFFERSON	108.0	122.5	145.1	158.3	185.0	197.7
JERSEY	63.6	68.5	81.5	88.8	102.7	108.8
JO DAVIESS	74.8	82.2	89.0	93.0	101.4	109.6
JOHNSON	21.1	22.2	25.2	27.3	31.7	34.0
KANE	1197.4	1322.6	1487.0	1635.9	1768.6	1929.0
KANKAKEE	420.6	448.1	508.9	544.8	599.2	619.4
KENDALL	134.3	149.1	174.1	203.8	221.4	226.5
KNOX	252.2	274.9	322.4	348.5	387.4	408.1

TABLE 1 TOTAL PERSONAL INCOME, ILLINOIS, SMSA S, AND COUNTIES, 1971-76
(MILLIONS OF DOLLARS)

SMSA OR COUNTY	1971*	1972*	1973*	1974*	1975#	1976#
LAKE	2112.2	2282.6	2487.8	2751.0	2998.3	3291.8
LA SALLE	458.7	486.8	563.4	621.5	704.1	743.6
LAWRENCE	53.9	62.4	73.0	83.5	91.8	97.5
LEE	136.0	150.4	175.9	196.9	223.9	225.0
LIVINGSTON	174.6	180.0	224.1	236.6	279.5	272.2
LOGAN	133.9	138.6	167.3	186.2	215.9	220.7
MCDONOUGH	108.2	118.6	144.0	154.4	187.7	188.4
MCHENRY	544.1	595.7	685.4	752.6	824.1	912.7
MCLEAN	447.6	478.1	562.7	629.1	729.7	748.5
MACON	557.7	598.6	668.4	746.1	820.2	883.5
MACOUPIN	162.3	178.1	211.6	229.6	265.6	277.3
MADISON	1074.0	1144.3	1249.1	1370.1	1496.6	1644.7
MARION	142.1	158.5	181.5	191.0	219.6	236.0
MARSHALL	51.2	53.0	64.4	71.2	83.5	85.5
MASON	65.8	68.3	86.8	93.6	119.2	120.0
MASSAC	41.0	44.7	50.9	54.8	65.9	71.3
MENARD	44.2	47.5	59.6	63.9	77.7	75.7
MERCER	55.4	62.4	79.1	88.5	108.0	106.2
MONROE	78.9	83.9	97.6	102.8	121.2	126.6
MONTGOMERY	111.5	122.3	148.4	161.6	195.0	200.0
MORGAN	155.0	167.5	196.7	211.0	250.3	251.8
MOULTRIE	53.8	60.6	71.2	78.6	91.2	87.4
OGLE	180.0	193.6	224.0	228.4	245.8	249.5
PEORIA	932.6	997.3	1113.9	1260.7	1437.1	1544.8
PERRY	77.8	82.7	97.0	105.3	124.7	128.9
PIATT	76.4	71.8	92.4	99.9	125.8	118.6
PIKE	60.3	69.5	92.9	86.6	100.2	103.6
POPE	8.1	8.6	9.5	10.5	13.9	15.2
PULASKI	22.6	22.9	26.0	30.1	36.0	37.5
PUTNAM	18.0	19.7	25.3	27.7	31.9	31.6
RANDOLPH	116.9	125.7	143.5	152.3	176.9	187.9
RICHLAND	50.0	62.4	74.4	82.0	88.0	92.1
ROCK ISLAND	729.7	795.8	907.8	1040.4	1136.2	1234.9
ST. CLAIR	1069.8	1147.8	1244.7	1350.7	1518.2	1622.9
SALINE	87.2	96.5	113.7	123.1	144.8	153.1
SANGAMON	807.1	862.7	949.7	1061.2	1212.4	1281.8
SCHUYLER	28.5	32.3	40.9	34.8	43.9	41.6
SCOTT	24.3	27.3	34.4	36.4	44.7	44.7
SHELBY	76.0	86.0	99.1	109.4	125.4	122.9
STARK	29.1	30.0	39.2	44.5	54.1	50.6
STEPHENSON	207.0	223.1	253.5	264.2	278.7	299.1
TAZEWELL	546.8	581.2	674.3	773.4	876.4	921.1
UNION	60.4	64.9	75.0	78.8	92.8	99.4
VERMILION	389.5	418.2	499.9	527.4	602.0	641.0
WABASH	42.5	47.3	54.5	65.4	76.4	82.0
WARREN	87.7	93.8	114.4	123.1	152.4	144.9
WASHINGTON	48.1	50.7	65.9	70.2	86.6	84.7
WAYNE	54.4	57.4	72.6	77.0	93.2	94.6
WHITE	55.7	60.5	71.7	84.7	104.4	102.7
WHITESIDE	256.5	285.8	330.4	365.4	391.0	410.1
WILL	1120.3	1243.7	1459.5	1574.1	1746.4	1932.4
WILLIAMSON	176.2	190.8	217.9	233.3	266.3	296.0
WINNEBAGO	1063.1	1167.7	1310.2	1423.9	1510.6	1635.5
WOODFORD	119.0	124.6	153.9	170.9	197.0	200.6

SOURCE: US DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS.
* ESTIMATES BASED ON 1967 SIC. # ESTIMATES BASED ON 1972 SIC.

TABLE 2 PER CAPITA PERSONAL INCOME, ILLINOIS ,SMSA S, AND COUNTIES, 1971-76, AND RELATIVES,* 1971 AND 1976
(RESIDENCE ADJUSTED)

SMSA OR COUNTY	PER CAPITA PERSONAL INCOME						PER CAPITA INCOME RELATIVES	
	1971	1972	1973	1974	1975	1976	1971	1976
ILLINOIS	4744	5075	5666	6215	6768	7259	115	113
BLOOMINGTON-NORMAL, IL	4149	4231	4953	5465	6313	6306	100	99
CHAMPAIGN-URBANA-RANTOUL, IL	3906	4200	4695	5141	5756	5975	95	93
CHICAGO, IL	5177	5528	6075	6676	7148	7785	125	122
DAVENPORT-ROCK ISLAND-MOLINE	4280	4690	5441	6062	6563	7137	104	112
DECATUR, IL	4476	4828	5360	5964	6494	6990	108	109
KANKAKEE, IL	4300	4568	5285	5645	6229	6438	104	101
PEORIA, IL	4592	4834	5532	6241	7062	7423	111	116
ROCKFORD, IL	4373	4791	5372	5806	6217	6716	106	105
ST. LOUIS, MO-IL	4428	4734	5189	5666	6144	6755	107	106
SPRINGFIELD, IL	4862	5183	5702	6342	7100	7365	118	115
ADAMS	4207	4550	5283	5468	6187	6452	102	101
ALEXANDER	2744	2799	2975	3601	4057	4305	66	67
BOND	3242	3515	4160	4264	5313	5441	78	85
BOONE	4678	4776	5361	5695	6536	6798	113	106
BROWN	3276	3964	4823	4763	6009	5501	79	86
BUREAU	4017	4250	5118	5540	6591	6687	97	105
CALHOUN	2923	3238	4001	4209	5295	5108	71	80
CARROLL	4115	4370	4874	5191	5206	5306	100	83
CASS	3985	4366	5245	5636	6329	6131	96	96
CHAMPAIGN	3907	4200	4696	5142	5756	5977	95	93
CHRISTIAN	4056	4372	5361	5815	6889	6787	98	106
CLARK	3359	3904	4496	4743	5134	5399	81	84
CLAY	2836	3432	3861	4029	4524	4634	69	72
CLINTON	3485	3612	4234	4510	5149	5172	84	81
COLES	3553	3914	4395	4940	5545	5568	86	87
COOK	5169	5511	6056	6664	7143	7786	125	122
CRAWFORD	3619	4039	4684	5337	5779	6098	88	95
CUMBERLAND	2906	3471	3905	4151	4380	4556	70	71
DE KALB	3707	4018	4566	5179	5502	5677	90	89
DE WITT	4002	4066	5122	5787	6837	6815	97	107
DOUGLAS	4111	4532	5507	5931	7204	6898	99	108
DU PAGE	5726	6165	6789	7498	7971	8716	139	136
EDGAR	3944	4478	5348	5527	6526	6278	95	98
EDWARDS	3270	3847	5120	5042	6509	6462	79	101
EFFINGHAM	3347	3846	4387	4854	5478	5788	81	90
FAYETTE	2720	3302	3794	4011	4671	4837	66	76
FORD	4713	4786	6259	6497	7939	7784	114	122
FRANKLIN	3169	3641	4137	4414	4989	5407	77	85
FULTON	3754	4151	4949	5219	6195	6398	91	100
GALLATIN	2762	3212	3369	4458	5798	6017	67	94

TABLE 2. PER CAPITA PERSONAL INCOME, ILLINOIS ,SMSA S, AND COUNTIES, 1971-76, AND RELATIVES,* 1971 AND 1976
(RESIDENCE ADJUSTED)

SMSA OR COUNTY	PER CAPITA PERSONAL INCOME						PER CAPITA INCOME RELATIVES	
	1971	1972	1973	1974	1975	1976	1971	1976
GREENE	2902	3141	4127	4789	5522	5362	70	84
GRUNDY	4577	4687	5474	6137	6742	7028	111	110
HAMILTON	2573	2900	3825	4291	5116	5112	62	80
HANCOCK	3508	3863	4677	5104	6090	6129	85	96
HARDIN	2848	3101	3194	3586	4126	4565	69	71
HENDERSON	3452	3856	5148	4888	6425	5737	84	90
HENRY	4079	4553	5350	5619	6222	6474	99	101
IROQUOIS	4114	4195	5476	5947	7181	6806	100	106
JACKSON	3251	3563	4120	4484	5341	5459	79	85
JASPER	2950	3695	4393	4424	5258	5457	71	85
JEFFERSON	3333	3744	4368	4790	5450	5688	81	89
JERSEY	3297	3537	4214	4602	5279	5627	80	88
JO DAVIESS	3371	3694	4044	4247	4555	4832	82	76
JOHNSON	2809	2893	3132	3259	3641	3845	68	60
KANE	4686	5115	5700	6169	6607	7137	113	112
KANKAKEE	4301	4569	5284	5645	6227	6435	104	101
KENDALL	4992	5261	5942	6833	7225	7138	121	112
KNOX	4176	4532	5348	5694	6323	6664	101	104
LAKE	5499	5858	6375	6973	7427	8108	133	127
LA SALLE	4100	4372	5112	5677	6431	6821	99	107
LAWRENCE	3028	3511	4088	4684	5200	5542	73	87
LEE	3607	4109	4832	5487	6221	6305	87	99
LIVINGSTON	4189	4337	5493	5803	6821	6813	101	107
LOGAN	4021	4315	5289	5937	6913	7079	97	111
MCDONOUGH	2903	2965	3630	3879	4734	4696	70	73
MCHENRY	4846	5192	5725	6148	6561	7087	117	111
MCLEAN	4150	4230	4951	5486	6312	6308	100	99
MACON	4477	4828	5361	5963	6494	6990	108	109
MACOUPIN	3648	3950	4668	5034	5755	6024	88	94
MADISON	4237	4504	4977	5480	6010	6623	103	104
MARION	3581	3963	4521	4776	5460	5896	87	92
MARSHALL	3851	4116	4881	5400	6248	6260	93	98
MASON	3965	3982	5099	5348	6581	6329	96	99
MASSAC	3034	3268	3708	4016	4721	5103	73	80
MENARD	4516	4714	5830	6104	7248	6914	109	108
MERCER	3243	3658	4569	5115	6146	5923	78	93
MONROE	4336	4451	5200	5456	6399	6667	105	104
MONTGOMERY	3682	3981	4870	5305	6391	6461	89	101
MORGAN	4200	4575	5444	5818	6994	7014	102	110
MOULTRIE	3982	4499	5355	5910	6751	6778	96	106
OGLE	4266	4534	5229	5322	5697	5832	103	91
PEORIA	4697	4988	5604	6320	7195	7706	114	120

TABLE 2 PER CAPITA PERSONAL INCOME, ILLINOIS ,SMSA S, AND COUNTIES, 1971-76, AND RELATIVES,* 1971 AND 1976
(RESIDENCE ADJUSTED)

SMSA OR COUNTY	PER CAPITA PERSONAL INCOME						PER CAPITA INCOME RELATIVES	
	1971	1972	1973	1974	1975	1976	1971	1976
PERRY	3872	4103	4811	5219	6075	6102	94	95
PIATT	4898	4556	5860	6359	7882	7354	119	115
PIKE	3156	3593	4878	4518	5203	5430	76	85
POPE	2070	2092	2313	2509	3289	3695	50	58
PULASKI	2539	2578	2981	3473	4129	4045	61	63
PUTNAM	3593	3805	4842	5203	5876	6057	87	95
RANDOLPH	3619	3975	4447	4733	5399	5735	88	90
RICHLAND	2923	3635	4338	4794	5106	5338	71	83
ROCK ISLAND	4402	4797	5530	6293	6852	7468	107	117
ST. CLAIR	3770	3994	4381	4823	5408	5715	91	89
SALINE	3267	3543	4295	4662	5445	5624	79	88
SANGAMON	4883	5212	5695	6359	7090	7393	118	116
SCHUYLER	3614	4152	5100	4389	5488	5162	87	81
SCOTT	3920	4340	5601	5976	7343	7329	95	115
SHELBY	3377	3765	4349	4768	5423	5276	82	82
STARK	3830	4005	5322	6117	7436	6941	93	109
STEPHENSON	4269	4591	5248	5489	5820	6290	103	98
TAZEWELL	4508	4698	5453	6204	6951	7189	109	112
UNION	3659	3967	4620	4892	5748	5923	89	93
VERMILION	4000	4282	5132	5425	6188	6351	97	99
WABASH	3273	3592	4198	4918	5761	6008	79	94
WARREN	4097	4334	5341	5761	7156	6740	99	105
WASHINGTON	3367	3431	4532	4787	5847	5578	81	87
WAYNE	3198	3348	4229	4496	5406	5470	77	86
WHITE	3317	3631	4320	5146	6309	5971	80	93
WHITESIDE	4046	4490	5180	5756	6139	6360	98	99
WILL	4415	4713	5168	5630	6028	6465	107	101
WILLIAMSON	3510	3736	4259	4530	5128	5700	85	89
WINNEBAGO	4342	4791	5373	5819	6183	6706	105	105
WOODFORD	4222	4336	5373	5874	6617	6557	102	103

* PERCENT OF NATIONAL AVERAGE.
SOURCE: US DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS.

TABLE 3 TOTAL LABOR AND PROPRIETORS INCOME BY PLACE OF WORK, BY MAJOR INDUSTRY, BY COUNTY, 1976
(THOUSANDS OF DOLLARS)

COUNTY	FARM	NON FARM									
		PRIVATE								GOVERNMENT	
		MINING	CONSTR.	MFG.	TRANS. PUBLIC UTILITIES	TRADE	FIN., INS. REAL ESTATE	SERVICES	OTHER	FEDERAL	STATE LOCAL
ILLINOIS	1501221	558022	3420402	18604467	4931068	11171082	3767785	9817026	126848	1989583	6637537
ADAMS	19784	0	13562	111329	22420	71391	11067	51157	0	3885	26910
ALEXANDER	463	0	3759	12931	4147	7147	0	0	69	855	5021
BOND	6320	548	1145	6079	2463	7700	0	8670	0	489	4024
BOONE	1690	0	6061	98069	7526	10960	2685	8819	0	714	9830
BROWN	5570	58	0	417	1034	1556	787	0	324	487	1789
BUREAU	28250	1040	11566	34408	5815	20269	3677	17077	683	1451	15167
CALHOUN	4337	139	269	155	220	2363	370	1251	129	479	2158
CARROLL	3646	343	1647	7016	9402	9011	2101	5816	488	9216	6533
CASS	9034	0	0	18098	0	8390	1612	0	139	769	5088
CHAMPAIGN	48485	959	44732	77049	35918	125318	23684	106112	1462	136918	201307
CHRISTIAN	36666	21307	4934	22100	0	25181	3724	0	443	1231	12880
CLARK	4693	5123	2393	8515	5166	9830	966	3808	261	639	6055
CLAY	3119	5156	1220	8123	3222	7450	995	3764	241	489	7301
CLINTON	10074	1445	5988	8919	7788	15101	2339	10818	465	758	18379
COLES	19946	1368	15352	57831	21768	30211	5880	22597	774	1702	37317
COOK	14131	63270	1726365	10378340	3145272	6948312	2705257	6243055	42159	920550	3480724
CRAWFORD	4695	6009	13101	38276	5852	12061	2410	6373	277	666	6907
CUMBERLAND	2271	0	312	3352	0	3906	560	0	0	249	3271
DE KALB	8070	0	14022	88491	10416	45430	8243	21350	0	2444	67585
DE WITT	19601	168	0	12448	8180	12464	2076	0	400	535	5978
DOUGLAS	26026	0	6290	24960	7721	12975	1953	0	0	769	7694
DU PAGE	10071	2764	239447	578711	153529	594581	138629	575697	8103	28337	231082
EDGAR	26126	204	2484	22591	0	12483	2086	7873	0	692	7433
EDWARDS	6829	0	822	13563	1743	3277	0	2067	223	325	2286
EFFINGHAM	11397	827	8736	41890	11823	27886	2954	16617	487	1845	10797
FAYETTE	10528	1921	2442	11453	3777	12050	1857	6420	196	1315	11302
FORD	22688	304	2984	14045	4023	12372	2128	5919	312	569	7160
FRANKLIN	2691	40018	5365	5605	7455	16798	2823	13608	223	1486	15556
FULTON	12218	35164	4781	41362	6662	20087	4292	18029	615	1237	17032
GALLATIN	6798	16991	836	2055	266	3747	348	1149	253	205	2640
GREENE	12635	375	1460	4309	5384	7528	1186	3721	380	870	6182
GRUNDY	11284	0	8550	44148	23352	19108	3021	9420	0	998	10555
HAMILTON	4612	759	541	1485	1180	2768	553	1660	199	656	4539
HANCOCK	20368	0	4240	4741	4226	10019	1880	8445	0	777	8636
HARDIN	752	7125	0	95	931	1163	229	1645	0	356	1893
HENDERSON	14748	120	673	174	0	2359	648	1039	0	365	2658

TABLE 3 TOTAL LABOR AND PROPRIETORS INCOME BY PLACE OF WORK, BY MAJOR INDUSTRY, BY COUNTY, 1976
(THOUSANDS OF DOLLARS)

COUNTY	FARM	NON FARM									
		PRIVATE								GOVERNMENT	
		MINING	CONSTR.	MFG.	TRANS. PUBLIC UTILITIES	TRADE	FIN., INS. REAL ESTATE	SERVICES	OTHER	FEDERAL	STATE LOCAL
HENRY	27792	0	17418	37179	12825	34599	6405	17763	0	2000	19604
IROQUOIS	57361	324	4507	21931	3657	20840	3601	11166	540	1340	11524
JACKSON	6176	7720	11354	16835	14894	32727	7278	30970	467	4792	101010
JASPER	7415	454	15102	5139	2211	6727	938	1963	192	672	3827
JEFFERSON	6753	38049	11712	18213	11606	24721	6643	21382	695	2480	14437
JERSEY	13863	0	1389	3676	2691	10081	1211	6592	155	579	8466
JO DAVIESS	3922	0	4124	17185	2727	9477	2046	4805	0	692	6891
JOHNSON	577	0	815	840	0	3775	302	1067	0	505	4118
KANE	6844	1642	65775	467774	58867	219890	54559	207059	5688	32200	171020
KANKAKEE	22102	522	24356	146915	24949	65648	10350	63148	1002	4484	90315
KENDALL	9300	0	4013	153021	3434	11041	2062	8618	0	664	10036
KNOX	25582	0	14283	116573	31132	47856	9114	36634	0	3320	40226
LAKE	9577	16574	135540	654563	71434	309967	58857	323914	9420	351118	162502
LA SALLE	43467	9759	22840	221783	34687	79818	14374	57480	1216	4661	41761
LAWRENCE	4679	6630	3091	16623	3192	7429	4061	5983	0	652	6422
LEE	15532	0	4974	28400	11034	20170	4579	16882	0	2033	46567
LIVINGSTON	47023	4111	10171	29260	5970	25162	4683	17736	995	1080	27925
LOGAN	26300	233	4485	33227	6804	22543	3753	18730	519	1133	39208
MCDONOUGH	30699	518	3505	23803	5373	24039	4389	11689	532	1465	28697
MCHENRY	8210	1979	40043	190501	16929	67506	17009	57283	3396	3963	43466
MCLEAN	53599	0	25797	87219	50543	89614	115895	78748	0	6010	68827
MACON	26191	1158	63678	312208	73447	103039	28269	99212	1028	6637	52778
MACOUPIN	19861	14818	8753	12009	9319	24369	4190	16053	543	2253	15679
MADISON	14268	3240	64119	511406	84312	142593	37899	122546	1409	14848	113292
MARION	9909	5786	12472	32020	20772	29254	4465	22601	230	2611	16452
MARSHALL	11451	0	3205	10665	2069	6404	1303	2752	0	440	4407
MASON	19694	354	2354	10156	3543	11294	2153	3913	480	673	8084
MASSAC	3333	0	2324	12726	10515	3755	878	3748	0	835	6177
MENARD	16264	0	1598	2664	2430	5252	1050	2959	0	567	5159
MERCER	19387	90	1692	1314	2827	7019	1164	4779	376	886	7355
MONROE	11386	0	5853	920	3491	8328	1608	4511	0	567	5465
MONTGOMERY	24010	12358	5625	22855	11541	20705	2977	12574	360	1726	10003
MORGAN	29050	108	9118	40245	14239	26654	6943	26077	661	1588	41783
MOULTRIE	17139	0	2381	4069	1632	10073	1056	5177	0	538	4262
OGLE	329	818	10548	69699	4774	25988	4127	12691	817	1693	17579
PEORIA	13403	7226	106667	411799	82111	235284	67467	220417	5206	29247	116716

TABLE 3 TOTAL LABOR AND PROPRIETORS INCOME BY PLACE OF WORK, BY MAJOR INDUSTRY, BY COUNTY, 1976
(THOUSANDS OF DOLLARS)

COUNTY	FARM	NON FARM									
		PRIVATE								GOVERNMENT	
		MINING	CONSTR.	MFG.	TRANS. PUBLIC UTILITIES	TRADE	FIN., INS. REAL ESTATE	SERVICES	OTHER	FEDERAL	STATE LOCAL
PERRY	5067	32993	4950	19028	3217	8871	1369	7317	79	596	9299
PIATT	29138	0	2276	5641	3278	8768	1762	7998	233	528	8141
PIKE	24675	623	2851	5067	3837	10253	1569	5347	492	694	6464
POPE	1040	105	0	0	0	783	144	0	96	1075	1341
PULASKI	1793	191	524	2167	1152	2159	271	4204	129	660	4342
PUTNAM	5916	0	0	17498	0	2428	413	1468	69	119	2237
RANDOLPH	9708	13230	7109	43232	14535	15253	2723	9477	241	1287	21299
RICHLAND	4592	9521	2180	19165	5560	11003	1383	7164	224	962	10531
ROCK ISLAND	6983	0	49094	499133	72773	168213	40181	108541	0	127297	95055
ST. CLAIR	20671	30110	75686	162171	113978	144686	35564	157899	1323	123932	106160
SALINE	5134	13949	3444	3108	8318	15288	3010	12297	1692	1796	14986
SANGAMON	45090	0	71364	120433	86854	161609	81343	182493	0	36886	238665
SCHUYLER	6356	1252	875	893	529	4151	376	2043	685	338	3650
SCOTT	7722	186	10909	734	1939	3076	577	1013	201	210	2414
SHELBY	17095	180	3121	4921	3421	8613	1386	5267	640	1503	7271
STARK	13541	0	451	1721	282	4178	620	1662	0	274	3046
STEPHENSON	5113	58	10049	96107	8070	27871	19555	25212	729	2126	19818
TAZEWELL	24918	0	61612	534230	38450	81144	20066	41861	0	3076	39581
UNION	4305	735	2042	13966	3567	5490	1079	4493	88	1165	26489
VERMILION	39398	1548	31967	205213	35837	64963	13579	57302	931	25025	37018
WABASH	4568	16305	5520	17675	3121	7044	0	5908	0	529	6099
WARREN	28183	307	1968	12582	3857	17510	2594	11331	286	910	8460
WASHINGTON	15353	739	1538	4702	2475	7518	1220	4833	270	659	4252
WAYNE	9019	5232	2492	12839	3915	10130	1259	6059	287	631	5727
WHITE	12743	10376	1760	2203	3451	11013	1639	5956	292	572	8342
WHITESIDE	7519	625	11299	164036	9725	39097	6249	20977	699	2738	29662
WILL	8705	8071	76451	366117	136442	146228	28471	130687	2360	9357	134415
WILLIAMSON	1597	21705	24294	39221	19910	31350	4535	17636	360	12320	19601
WINNEBAGO	4028	0	61205	666763	79541	203443	47504	176654	0	15139	110144
WOODFORD	15468	0	4407	14741	3835	19305	2411	9923	0	699	9315

SOURCE: U.S. DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS.
(0) NOT SHOWN TO AVOID DISCLOSURE OF CONFIDENTIAL INFORMATON OR TOTAL LESS THEN $50,000. DATA INCLUDED IN TOTALS.

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SCOTT COUNTY
PERSONAL INCOME BY MAJOR SOURCE, 1971, 1974-76
(THOUSANDS OF DOLLARS)

ITEM	1971*	1974*	1975#	1976#
TOTAL LABOR AND PROPRIETORS INCOME BY PLACE OF WORK(1)				
BY TYPE				
WAGE AND SALARY DISBURSEMENTS	9219	13064	16661	19053
OTHER LABOR INCOME	458	756	1111	1159
PROPRIETORS INCOME(2)	4067	9516	12306	8769
FARM	2541	7523	10419	6788
NONFARM(2)	1526	1993	1887	1981
BY INDUSTRY				
FARM	3051	8135	11178	7722
NONFARM	10693	15201	18900	21259
PRIVATE	8937	12991	16370	18635
AG. SERV., FOR., FISH., AND OTHER(3)	200	186	204	201
MINING	0	137	168	186
CONSTRUCTION	4214	6324	8934	10909
MANUFACTURING	516	704	804	734
TRANSP. & PUBLIC UTILITIES	0	1846	1863	1939
WHOLESALE AND RETAIL TRADE	1692	2516	2995	3076
FINANCE, INSURANCE, AND REAL ESTATE	354	391	451	577
SERVICES	713	887	951	1013
GOVERNMENT AND GOVERNMENT ENTERPRISES	1756	2210	2530	2624
FEDERAL, CIVILIAN	144	189	197	167
FEDERAL, MILITARY	39	43	44	43
STATE AND LOCAL	1573	1978	2289	2414
DERIVATION OF PERSONAL INCOME BY PLACE OF WORK				
TOTAL LABOR AND PROPRIETORS INCOME BY PLACE OF WORK	13744	23336	30078	28981
LESS: PERSONAL CONTRIBUTIONS FOR SOCIAL INSURANCE BY PLACE OF WORK	535	895	1091	1232
NET LABOR AND PROPRIETORS INCOME BY PLACE OF WORK	13209	22441	28987	27749
PLUS: RESIDENCE ADJUSTMENT	4085	4681	4424	4354
NET LABOR AND PROPRIETORS INCOME BY PLACE OF RESIDENCE	17294	27122	33411	32103
PLUS: DIVIDENDS, INTEREST, AND RENT(4)	4071	5164	6262	6915
PLUS: TRANSFER PAYMENTS	2932	4085	5003	5709
PERSONAL INCOME BY PLACE OF RESIDENCE	24297	36371	44676	44727
PER CAPITA INCOME	3920	5976	7343	7329
TOTAL POPULATION	6200	6100	6100	6100

* BASED ON 1967 SIC. # BASED ON 1972 SIC.

(1) CONSISTS OF WAGE AND SALARY DISBURSEMENTS, OTHER LABOR INCOME, AND PROPRIETORS INCOME. PRIMARY SOURCE FOR PRIVATE NONFARM WAGES: ES202 -- ILLINOIS BUREAU OF EMPLOYMENT SECURITY.

(2) INCLUDES THE CAPITAL CONSUMPTION ADJUSTMENT FOR NONFARM PROPRIETORS.

(3) INCLUDES WAGE AND SALARIES OF US RESIDENTS WORKING FOR INTERNATIONAL ORGANIZATIONS.

(4) INCLUDES THE CAPITAL CONSUMPTION ADJUSTMENTS FOR RENTAL INCOMES OF PERSONS.

(0) NOT SHOWN TO AVOID DISCLOSURE OF CONFIDENTIAL INFORMATION, DATA INCLUDED IN TOTALS.

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A Future Recession?

There is a great deal of speculation about the possibility of recession in 1979. Those pointing to recession are relying for the most part on the belief that a tightening in monetary policy will induce a weakening in the economy. In addition, there is a feeling that time is simply running out on the current expansion. This view is nurtured on the belief that an economic expansion generates cumulative imbalances. Eventually, individual businesses institute corrective measures; in aggregate these measures result in a recession.

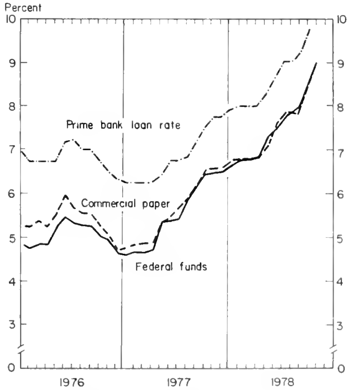
In terms of performance, however, there is no persuasive evidence of economic weakness. Economic activity continues its moderate expansion. There has been no diminution in the rate of growth in industrial output. Employment continues to move higher, and unemployment has declined. Consumer spending increases have not slowed. The major problems in the economy — inflation and rising interest rates — are symptoms of a business expansion, not of an underlying weakness.

Tightening Monetary Policy?

There is no doubt about the fact that interest rates have increased sharply since August. The prime rate, the rate of interest banks charge to their most creditworthy customers, reached 11 percent in mid-November (see chart). A year earlier the prime rate was 7.75 percent, and by August it had edged upward to 9 percent. At the same time, in order to secure funds to lend banks have found it necessary to make comparable increases in rates of interest they pay to depositors. In mid-November, banks were paying about 10.75 percent to customers placing $100,000 or more into certificates of deposit. Interest rates on federal funds, commercial paper, Eurodollars, and other sources of bank funds also registered corresponding increases.

It is a mistake, however, to jump to the conclusion that interest rate increases have been caused by a tightening in monetary policy. Federal Reserve officials grimly acknowledge that they are doing their unpleasant duty in the face of an overheated economy. They point to increases in the discount rate — the rate of interest charged by the Federal Reserve on short-term loans to member banks — to a record 9.5 percent. They show an increase in reserve requirements (the portion of CD funds that member banks must hold on deposit with the Federal Reserve) on longer CDs with initial maturities of 30 to 179 days. Any course in basic economics teaches that these prudent measures are indications of a tightened monetary posture.

Interest Rates



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Even so, it is a mistake to accept these actions as evidence of monetary tightening. Posturing is one thing, and substantive actions are quite another. Discount rate increases (or decreases) are largely symbolic. For the most part, the Federal Reserve does not raise (or lower) the discount rate until other interest rates have already risen (or fallen). In any event, an increase in the discount rate has an insignificant direct effect on bank costs. In recent years member bank borrowing from the Federal Reserve has seldom risen above $1 billion to $2 billion. By comparison, demand and time deposits — the chief liabilities of commercial banks — total about $875 billion.

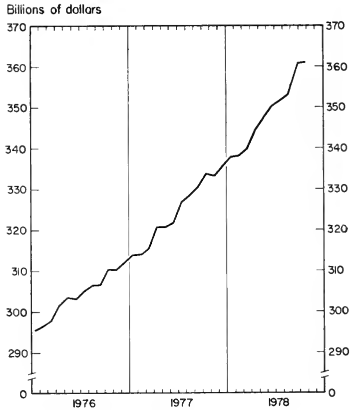
The principal effect of the recent increase in reserve requirements on large CDs (those of $100,000 or more) has been to increase the cost to banks of such funds. When the marginal reserve requirement on large CDs was 6 percent, $94 of every $100 were available to lend. If a bank were to pay a depositor 10 percent for a CD, the effective cost to the bank of loan funds would be 10.64 percent. A rise in reserve requirements to 8 percent would mean that a bank would lend only $92 of each $100 CD deposit, driving the effective cost to 10.87 percent. Such cost increases tend to be passed forward to borrowers in the form of interest rate increases. Even so, this supply-side factor has accounted for only about one-eighth of the rise in interest rates since August. The remaining interest rate increases have resulted from demand factors, as business loans have expanded at more than a 10 percent annual rate since August.

If monetary policy is measured by the growth in monetary aggregates, it is clear that monetary actions continue to be expansive. The money supply, demand deposits plus currency (usually referred to as M-1), has expanded at more than a 9 percent annual rate since August, even more rapidly than during the preceding year (see chart). M-2, the money supply defined to include time deposits, has risen at nearly an 11 percent rate since August. In the preceding year, M-2 rose 8.1 percent. In short, the growth in monetary aggregates has accelerated since August. Monetary policy has not tightened.

Economic Weakness?

Output of the economy has continued to edge higher. Real GNP — that is, gross national product adjusted for price changes — rose at a 3.4 percent rate in the recent third quarter. Although the third-quarter gain has been characterized as a slowdown, it was just below the median of the 14 quarter-to-quarter real GNP changes since the expansion began in early 1975. Over the past year, real GNP rose 3.9 percent.

Money Supply



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Industrial production increases have not slowed. In fact, recent increases have accelerated. Over the past year, the Federal Reserve Board's index of industrial production — a measure of the output of mines, factories, and utilities — rose 6.5 percent; since March, output has risen at more than a 9 percent rate. In contrast, housing starts, another measure of physical output, have not risen in 1978. They have continued to fluctuate near a 2.1 million unit annual rate.

Employment has continued to expand. Indeed, increases in employment are an important ingredient in bringing about increases in output. Employment growth averaged 4.2 percent in the past 12 months, substantially more rapid than the 3.6 percent average rate of employment growth since the beginning of the current economic expansion (April 1975).

Reflecting the expansion in employment, the unemployment rate has declined to 5.8 percent, almost a full percentage point below its year-earlier level. Most of the fall in unemployment occurred during the last months of 1977 and the early months of 1978. Since spring, unemployment has fluctuated around 6 percent of the labor force.

Consumer purchases remain strong. Personal consumption expenditures rose at nearly a 10 percent annual rate in the third quarter, and have risen nearly 12 percent over the past year. However, these sales figures

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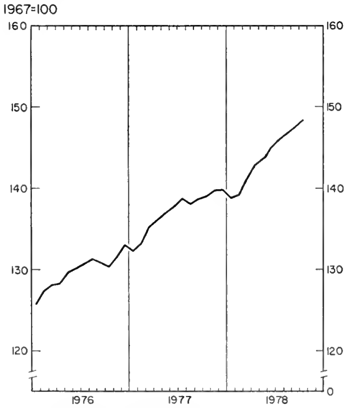
are based on market prices. Therefore, their increases mirror advances in the rate of inflation. Consumer prices rose more than 8 percent during the year; hence, real consumer purchases — that is, the items actually carried home from the store — expanded about 4 percent over the period.

Retail sales, which account for more than one-half of consumer spending, weakened in October. Over the past few months, personal income growth has been less than the rate of inflation — thereby reducing real income. In the face of adversity, consumers tend to shift their spending away from durables. Therefore, it is not surprising that automobile sales have lagged in recent months. It is always tempting to seize upon such an economic weakness as "the tip of the iceberg." However, the retail sales data are extremely erratic; they may dart hither and yon with little substantial provocation.

The rate of inflation is the major economic problem facing the nation. Consumer prices rose 8.2 percent over the past year and have accelerated to more than a 9 percent annual rate since last December. Producer prices rose nearly 9 percent during the year, with food prices showing the most rapid increases.

Inflation is a problem chiefly because it results in a redistribution of real income and in a shift in the real value of wealth holdings. Some individuals enjoy income streams that rise more rapidly than the average rate of inflation; in general, such individuals experience rising real incomes. Many others are struggling through a period during which their incomes are rising less rapidly than the rate of inflation. These people are finding it necessary to reduce their standards of living.

Industrial Production



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People with funds invested in savings forms generally available to small savers — such as savings accounts at banks or saving and loan associations — are finding that the real value of their savings has declined over the past five years or so. In contrast, those who have invested in real assets — such as real estate — have generally experienced substantial increase in the real value of their wealth.

Interest Rates, Inflation, and Recession?

There is a great deal of talk to the effect that rising interest rates and inflation are leading to recession. One way of thinking about this process is to consider the analogy of a poker game. In a poker game, every player is dealt his hand. Some have a strong hand from the outset; others visualize prospective good hands — depending on the way cards fall in the future; still others face grim prospects. All bet, or drop out of the game. Many of the players are "betting on the come." As the game proceeds, those with weak hands or faint hearts withdraw from the game. At length, there is a winner; and even some of the losers may have had strong hands.

The economic process within an environment of inflation and rising interest rates possesses similar characteristics. Each economic unit — businesses and consumers — has its own position within the economy. Each has been dealt its hand. A business firm has a given pace of operations; it purchases inputs (including borrowed funds), engages in a productive process, and sells its outputs. A business firm may seek to improve its hand; it may invest to expand its operations. Similarly, a household has a given pace of operations; it purchases the necessary goods and services to maintain its standard of living; members of the household sell their services or otherwise earn income. Households may seek to improve their standards of living.

It is useful to refer to the costs of maintaining an economic position as "position-making" costs. Inflation and rising interest rates serve to increase such costs. In order to stay in the game, many (if not most) business firms are induced to bet on the come. In doing so they rely on the continuation of the inflation process; they bet on their ability to increase their output prices at least as rapidly as their position-making costs rise. Beyond this, decisions to expand a firm's pace of operations face increased uncertainties.

As the inflation process continues, position-making costs become increasingly difficult to maintain. Weak firms begin to scale back their operations; stronger firms then begin cutting. A cumulative process is set into motion; economic contraction sets in.

Table rules often dictate how many rounds of betting a given poker hand can entail. Not so with the economy. Economists do not know how to determine the timing of an economic downturn. At best we can only indicate that some of the factors leading to recession have been set firmly in motion. We do not know how long it will take for business contractions, and even failures, to become a prominent feature of the economy. But the prospect is becoming increasingly likely. WILLIAM R. BRYAN

Local Illinois Developments

Employment in Four SMSAs

One of the determinants of the economic vitality of a region is the change in the absolute number of employed persons. The accompanying graph depicts nonfarm employment trends for four Illinois standard metropolitan statistical areas (SMSAs): Rock Island-Moline, Rockford, Peoria, and Metro-East (the Illinois section of the St. Louis area). These major cities vary widely in their economic character and geographic location, thus giving a general indication of economic trends in the State.

In 1977, one-third of the workers employed in Rock Island-Moline were in manufacturing, 23 percent were in wholesale and retail trade, another 19 percent were employed by various levels of government, and 10 percent were engaged in service-related occupations. The economy had a rather sharp downturn in 1970–71, but survived the 1974–75 recession without any loss in area employment.

Of the four cities, Rockford had the largest portion of the area work force engaged in manufacturing — 44 percent. Another 20 percent were involved in wholesale and retail trade, 14 percent in services, and 10 percent in government. This city, with a large component involved in the manufacture of machine tools, showed rather stagnant growth during the 10-year period from 1969 to 1978 and a noticeable drop in employment during the recent recession.

Of the four cities shown, the Peoria SMSA exhibits the most constant and sustained growth pattern. In that area 34 percent of employed persons work in manufacturing, 23 percent in wholesale and retail trade, 18 percent in services, and another 10 percent for the various levels of government. With this diverse economic base, Peoria has been somewhat sheltered from fluctuations in individual economic markets.

Finally, in 1977 Metro-East had 25 percent of its work force engaged in manufacturing, 22 percent in wholesale and retail trade, 16 percent in services, and 20 percent in government. The area experienced a fairly sharp fall in the total number employed during the 1974–75 recession. For most of the period from 1969 through 1978 it had suffered a decline in the absolute number employed, but this trend seems to have reversed since 1975.

In the State as a whole, approximately 27 percent of the work force is engaged in manufacturing, 23 percent in wholesale and retail trade, 18 percent in providing services, and an additional 15 percent in governmental employment. The total number of nonfarm workers was approximately 4.57 million in 1977. This represented a rise of only 5 percent since 1959 and is less than 1 percent above the previous high in 1974. An overall decline in manufacturing employment over the decade has been offset by sizable increases in trade, finance-insurance-real estate, and services.

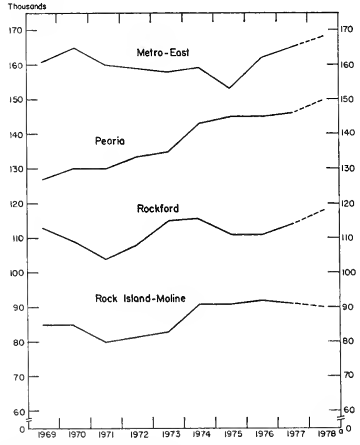
Illinois Business Indexes

Item	Sept. 1978 (1967=100)	Percentage change from Aug. 1978	Percentage change from Sept. 1977
Employment-manufacturing[1]	89.4[a]	+0.3	+1.1
Weekly earnings-manufacturing[1]	221.7[a]	+2.2	+6.4
Consumer prices in Chicago[2]	193.8	+1.2	+8.6
Life insurance sales (ordinary)[3]	269.4	-4.3	+12.2
Retail sales[4]	226.5[a,b]	+2.8	+8.7
Farm prices[5]	215.0[a]	+0.0	+20.7
Building permits-residential[4]	112.2	+1.3	-13.0
Coal production[6]	99.1	-7.2	+2.3
Petroleum production[7]	40.6	-0.3	-7.0

[1]Ill. Dept. of Labor. [2]US Bureau of Labor Statistics. [3]Life Ins. Agcy. Manag. Assn. [4]US Dept. of Commerce. [5]Ill. Crop Rpts. [6]Ill. Dept. of Mines. [7]Ill. Geol. Survey.

[a]Preliminary. [b]August 1978 compared with July 1978 and August 1977.

Nonfarm Employment, Selected SMSAs



[a] Average of first two quarters.
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Comparative Economic Data for Selected Illinois Cities, September 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$ 113,053[a]	3,889.1[a]	$ 53,119[a]	5,063.0	5.1
Percentage change from	Aug. 1978	-29.4	+3.2	+23.8		
	Sept. 1977	+38.5	+10.9	+12.2		
NORTHERN ILLINOIS						
Chicago		$ 54,047	1,871.2	$ 41,554	3,222.7[b]	5.1[b]
Percentage change from	Aug. 1978	-46.8	+0.6	+28.2		
	Sept. 1977	+72.8	+7.6	+11.3		
Aurora		$ [illegible],666	159.2	$ 702	37.8	4.3
Percentage change from	Aug. 1978	-17.6	+15.7	+29.0		
	Sept. 1977	+86.3	+31.1	+47.4		
Elgin		$ 1,680	124.8	$ 721	27.6	4.9
Percentage change from	Aug. 1978	+62.1	+36.5	+18.0		
	Sept. 1977	-43.2	+51.8	+28.2		
Joliet		$ 1,690	401.0	$ 392	46.2	4.8
Percentage change from	Aug. 1978	-57.0	+4.2	+23.6		
	Sept. 1977	-35.8	+6.0	+28.5		
Kankakee		$ 504	82.8[c]	$ 258	40.4[b]	6.2[b]
Percentage change from	Aug. 1978	-44.8	+11.5	+18.3		
	Sept. 1977	+35.1	+14.5	+35.7		
Rock Island-Moline		$ 1,927	145.0[d]	$ 1,198	172.4[b]	4.0[b]
Percentage change from	Aug. 1978	-48.9	+11.3	+7.2		
	Sept. 1977	-4.4	+17.4	+4.9		
Rockford		$ 2,528	171.0	$ 885	131.0	4.5
Percentage change from	Aug. 1978	-35.5	+2.3	+8.9		
	Sept. 1977	-26.8	+10.5	+7.2		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 3,861	60.4	$ 982	61.0[b]	3.1[b]
Percentage change from	Aug. 1978	-29.7	+7.6	+9.5		
	Sept. 1977	-5.0	+8.6	+18.1		
Champaign-Urbana		$ 16,876	59.8	$ 741	72.5[b]	4.1[b]
Percentage change from	Aug. 1978	+354.0	+4.0	+25.3		
	Sept. 1977	+1,076.8	+3.4	+8.0		
Danville		$ 1,323	49.6	$ 240	19.1	6.4
Percentage change from	Aug. 1978	+49.3	+4.6	+14.2		
	Sept. 1977	+105.7	+9.7	-38.1		
Decatur		$ 3,679	135.6	$ 503	57.2[b]	8.2[b]
Percentage change from	Aug. 1978	-60.2	-2.7	-7.8		
	Sept. 1977	-24.9	+10.6	+5.8		
Galesburg		$ 766	35.3[c]	$ 178	16.1	5.4
Percentage change from	Aug. 1978	-17.0	-6.0	+24.4		
	Sept. 1977	-34.4	+13.1	+10.5		
Peoria		$ 3,978	230.6	$ 1,408	170.2[b]	4.2[b]
Percentage change from	Aug. 1978	-62.3	+9.8	+11.3		
	Sept. 1977	-49.6	+17.8	+21.6		
Quincy		$ 693	44.4	$ 251	42.9	4.9
Percentage change from	Aug. 1978	-25.5	+0.0	+17.8		
	Sept. 1977	-87.6	+1.8	+18.3		
Springfield		$ 12,278	127.9	$ 2,053	91.0[b]	5.3[b]
Percentage change from	Aug. 1978	+109.4	-10.3	+0.4		
	Sept. 1977	+151.2	+13.9	+14.5		
SOUTHERN ILLINOIS						
East St. Louis		$ 45	30.4	$ 180	22.5	8.7
Percentage change from	Aug. 1978	-36.6	-1.9	+4.0		
	Sept. 1977	-74.2	+4.8	+17.6		
Alton		$ 1,294	83.7	$ 148	15.2	5.9
Percentage change from	Aug. 1978	+94.2	-3.5	+24.3		
	Sept. 1977	-64.1	+20.0	+18.4		
Belleville		$ 397	34.7	$ 436	19.6	3.6
Percentage change from	Aug. 1978	-38.9	-0.8	+10.6		
	Sept. 1977	-67.5	+10.5	+80.9		
Carbondale-Murphysboro		$ 821	[illegible]1.7	$ [illegible]	[illegible].2	7.2
Percentage change from	Aug. 1978	+74.3	+8.5	+2.[illegible]		
	Sept. 1977	+9.7	+1.4	+14.5		

[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local post office reports; accounting period ending 6 October 1978. [4]Illinois Department of Labor.

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory.

[d]Includes East Moline.

The Illinois Timber Buyer

Little is known about the timber industry in Illinois. Information about the timber buyer and his business practices is needed for planning, developing, and managing Illinois forest resources.

All people purchasing standing timber in Illinois must be licensed by the Illinois Division of Forestry. To obtain information, all the licensed timber buyers (368) in 1976 for Illinois were sent questionnaires. Fifty percent of the timber buyers returned completed questionnaires. The discussion that follows is based on an analysis of those returned questionnaires.

Standing Timber Purchased, 1976

In 1976, approximately 96.4 million board feet of standing timber was purchased in Illinois. For illustrative purposes, and assuming that the average amount of lumber in a house is 10,000 board feet and that all the Illinois timber cut went into houses, this was sufficient volume to build approximately 9,600 houses. The stumpage value of the standing timber, at $40 per thousand, would be nearly $4 million. The 96.4 million board feet was sold in approximately 1,960 separate timber sales.

Fifty-five percent of the licensed timber buyers purchasing timber in 1976 were involved in no more than five separate sales in Illinois. Only 20 percent of the buyers had obtained more than 10 sales. In addition, nearly two-thirds purchased a total of less than 250,000 board feet of Illinois timber in 1976 (Table 1).

Using the median number of purchases by timber buyers, 4, and the median total amount purchased, 145,000 board feet, it can be estimated that the size of each purchase was approximately 36,250 board feet.

Standing Timber Logged, 1976

The amounts of standing timber purchased and logged are different because the time period to log a tract generally is spread over several years. In 1976, it is estimated that 122 million board feet of standing timber were logged on 56,000 acres in Illinois. Using the $40 stumpage price, this volume was worth nearly $5 million to landowners and was sufficient volume to build 12,200 homes. Again, nearly two-thirds of the timber buyers that logged in Illinois in 1976 cut less than 250,000 board feet (Table 1). The median amount of standing timber cut by each buyer was 148,500 board feet.

Table 1. Purchase and Logging of Standing Timber, Illinois, 1976

Board feet (Doyle Scale)	Percentage of timber buyers	
	Purchases	Logging
Less than 10,000	4	6
10,000 - 49,999	16	15
50,000 - 99,999	16	14
100,000 - 249,999	29	27
250,000 - 499,999	10	10
500,000 - 999,999	17	19
1,000,000 - 4,999,999	6	6
5,000,000 or more	2	3

Table 2. Acreage of Standing Timber Cut in Illinois, 1976

Acreage	Percentage of buyers
Less than 50	30
50 - 99	11
100 - 249	33
250 - 499	14
500 - 999	6
1,000 or more	6

Nearly three-fourths of the buyers that logged in 1976 cut no more than 250 acres of standing timber (Table 2). The median amount of acreage logged was 100 acres.

Again, using the median number of purchases, 4, and the median acreage logged by each buyer, 100 acres, it can be estimated that the size of each tract logged was approximately 25 acres.

Harvesting Practices

Nearly all of the timber buyers in their logging operations cut sawlogs in 1976 (Table 3). Nearly 30 percent cut 100 percent of their timber into sawlogs. The most popular products were veneer logs and cooperage. Other products included pulpwood, pilings, and posts.

When asked to give the major timber species logged, the buyers most frequently mentioned oak, black walnut, soft maple, and cottonwood.

The timber buyers that logged in 1976 reported logging in every month. However, the proportion logging did vary by season. The greatest proportion of buyers logged in September, October, and November; the slowest month for logging was April.

Business Practices

Not all of the licensed timber buyers purchase standing timber each year. In 1976, 61 percent of the buyers bought standing timber in Illinois. This percentage was down slightly from 1975 when 66 percent of the buyers purchased Illinois timber. Nearly three-fourths of the buyers did all of their purchasing in Illinois in 1976. In addition, nearly three-fourths of the buyers traveled less than 50 miles (one way) to their logging jobs in 1976. Only 8 percent of the timber buyers traveled more than 100 miles.

Most of the timber sales reported by buyers were for one year duration (82 percent). Very few of the buyers had sales lasting more than two years.

The most popular method for paying for timber was lump sum before cutting begins (76 percent). Pay as cutting progresses was also used by more than one-third

of the buyers in 1976.

Sixty percent of the buyers would accept timber sales of less than 3,000 board feet, depending on species, size, and quality. However, nearly 20 percent desired sales greater than 5,000 board feet. All of the timber buyers learned of at least one sale in 1976 via word of mouth. In addition, more than one-third received one or more bid invitations. Advertisements and state listings were other methods by which buyers learned of prospective sales.

All of the timber buyers purchasing timber in 1976 said they had obtained at least one sale from a private landowner. More than three-fourths of the timber buyers used a timber deed for at least one of their timber sales. However, slightly less than one-half bought a sale in which the timber was marked before cutting and about one-third of the buyers reported having at least one sale where the volume of standing timber had been estimated by the seller.

Nearly all of the buyers (96 percent) used the Doyle Log Rule to measure the volume of timber cut; the remainder used the Scribner Log Rule and/or the International ¼ Inch Rule.

Table 3. Volume of Standing Timber Cut, by Product, Illinois, 1976

Percentage of volume logged	Saw-timber	Veneer	Coo-perage	Pulp-wood	Posts, pilings, other
	Percentage of timber buyers				
1-25	6[a]	37	19	3	8
26-50	15	7	5	2	2
51-75	11	2	2	2	1
76-99	28	2	-	1	-
100	29	5	2	2	2

[a]This can be interpreted as 6 percent of the timber buyers cut 25 percent or less of their logging volume for sawtimber.

Summary

The 368 licensed timber buyers in Illinois bought 96.4 million board feet in 1,960 sales in 1976. In addition, they logged 120 million board feet on 56,000 acres. Most of the logging was for sawtimber and the tracts were within 50 miles of the buyer's residence.

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The IBR this month presents the first of two parts of Dr. Richard D. Bartel's analysis of changes in the balance of payments position of the United States since 1970. The second part, which will appear in the February 1979 issue, will complete the analysis and examine the implications of the changes.

Dr. Bartel is an economist with the Special Study on Economic Change, Joint Economic Committee, US Congress. Prior to joining the SSEC, from 1969 to 1978, he was an economist in the International Research Department and the Foreign Department of the Federal Reserve Bank of New York. Dr. Bartel received his Ph.D. in economics from Columbia University, where he served as an Instructor from 1965 to 1969.

The US Current Account in Structural Change: I

RICHARD D. BARTEL

During the past 15 years, the United States current account has undergone a striking structural change. This country's balance on international trade in merchandise has reversed itself, and earnings on invisible, or service, transactions have become an increasingly important factor in our international payments position. Until 1971 the United States had registered a merchandise trade surplus throughout this century. In the 1970s, however, rising trade deficits have displaced the solid surpluses of the 1960s. Indeed, the unprecedented $31 billion trade deficit experienced in 1977 may well be exceeded in 1978. Meanwhile, the balance on invisible transactions, which in the past was a relatively stable and modest part of our balance of payments, has become a positive factor which generated a surplus of some $20 billion in 1977.

The current account is only one among several alternative balances which the analyst can strike to study a country's international economic transactions. Each balance has by definition a different scope and is useful and informative for different reasons. The current account conveniently summarizes receipts and payments on goods, services, and transfers which can be related to current gross national product (GNP). The balance on current account indicates how a country allocates economic resources with respect to the rest of the world. A deficit signals that the US is absorbing more economic resources than it is producing at home; that is, we are consuming resources from the rest of the world. A surplus implies the opposite; domestically absorbed resources are less than current output, and resources are freed to the rest of the world.

From the standpoint of short-run economic developments and stabilization policy, the current account can be used as a macroeconomic indicator showing the link between economic activity in the United States and other nations. Short-term economic downswings and recoveries — the target of domestic demand management policies — are clearly reflected in US trade performance and our external position. The current account balance, viewed from a different and longer-term perspective, indicates the role our country plays in international investment and finance. The current account balance shows the size and direction of capital flows between the US and the rest of the world. A deficit signals that this country is a net borrower (surplus corresponds to a net lender) and how the resultant capital transactions affect our overall international investment position.

US Trade Performance

The dramatic deterioration of the US trade position in recent years has riveted the focus of policymakers and the popular press alike. Not only has US trade moved into deep deficit, but our trade structure has changed. The transformation has affected both the commodity composition and geographic distribution of US trade flows and the interplay between commodity trade, transactions in the service account, and international investment. Analysis of the geographic distribution and commodity composition of US exports and imports reveals how trade structure has responded to powerful economic transformations taking place in the global economy. These include (1) the oil price increases since 1972 and the increasing US dependence on oil imports as an energy source; (2) divergent longer-run growth rates among various trading partners; (3) sharp but relatively short-lived cyclical fluctuations; (4) a substantial alteration in dollar exchange rates; and (5) the rapid emergence of the less developed countries (LDCs) as exporters of manufactured goods. This latter development stems from the widespread economic advance of the LDCs in the 1970s, including the transfer of modern production technology through international direct investment and development assistance. Changing trade structure also suggests something about overall US competitiveness in the world economy — both the performance of our exports in world markets and the ability of our domestic industries to compete with foreign suppliers to US markets.

The impact of these dynamic, worldwide economic transformations is evident in the US current account (summarized in Table 1). Comparing US international transactions on goods and services in the 1960s with experience in the 1970s brings out the striking shift in these two components of the current account. From the merchandise trade data, exports exceeded imports by an average $4 billion a year in the 1960s, standing in sharp contrast to the astonishing trade deficit of over $30 billion in 1977. After the net surplus on service transactions hovered around $2 billion on average in the 1960s, it soared to some $20 billion last year. Consequently, the balance on goods and services swung from an average annual surplus of $6 billion in the preceding decade to a deficit exceeding $10 billion last year, and the balance on current account displayed a similar reversal from a modest surplus of some $3 billion to last year's $15 billion deficit.

Among the diverse current account transactions, the most fundamental shift is the extraordinary rise in merchandise imports in the 1970s. Separating fuel from nonfuel imports (Table 1) shows how fuel imports have soared in value from about $2 billion a year on average in the 1960s to almost $48 billion last year. This jump resulted not merely from the fivefold hike in oil import unit values since 1972 but reflected a substantial rise in US dependence on imported oil. Domestic oil consumption continued to rise with the long-run expansion of our

economy, albeit interrupted by the 1974–75 recession. Consequently, the volume of oil imports rose by about 35 percent in the five years through 1977, and imports as a share of total US oil consumption climbed from about 40 percent to 50 percent. In contrast to the extraordinary surge in the value of oil imports, nonfuel imports rose about fivefold from the average levels in the 1960s to the present.

Merchandise exports, meanwhile, grew more slowly than total imports over this period. Once again, it is useful to distinguish two broad export categories — agricultural and nonagricultural exports — since fairly different sets of economic variables affect their movements over time. This distinction underscores the importance of agricultural goods — about one-fifth of total exports — in our overall trade performance. Thus, the US as an exporter of agricultural commodities stands unique among other major industrial countries, in that we share some common economic interests with other primary producing countries. In recent years, agricultural exports have grown more slowly than in the early 1970s when receipts were inflated both by steep rises in world commodity prices and heavy demand stemming from poor harvests elsewhere.

The value of nonagricultural exports, including a wide range of processed and finished manufactures, consumer and capital goods, grew somewhat more rapidly than agricultural exports from the 1960s to the present. One important recent development is masked by this apparent growth, however. Nonagricultural exports by *volume* remained essentially flat between 1974 and 1977 — the apparent gain, according to Department of Commerce data, being attributed entirely to price increases.

Viewing US merchandise trade in long-term perspective leads to some conclusions about our trade performance over the past 15 years or so. The remarkable deterioration in our trade deficit is in large part attributable to surging oil imports, but oil is only part of the story. Transactions in nonagricultural exports and nonfuel imports — roughly balanced in the 1960s — also registered a growing deficit in 1977. Other factors underlying this turnaround are discussed below, after a review of international service transactions in the current account.

"Invisibles": The Mounting Surplus

Service items in the US international accounts, or "invisibles," have yielded a mounting surplus in recent years. In 1977 the surplus exceeded $20 billion (Table 1). The strong upswing in net service receipts, since it appears to be a significant change from the modest surpluses recorded in the 1960s, adds an important positive aspect in the current account to the otherwise worrisome trade position. Furthermore, the growth in net services receipts, at least until 1977, more than offset the deterioration in the US trade accounts.

The rapid expansion of private investment income (net) is the most prominent factor underlying the rise in net service receipts. The increase in investment income began to appear even before the onset of the oil crisis. Net private investment receipts — interest, dividends, and branch earnings from the cumulative stock of our foreign assets — tripled from an annual average of nearly $5 billion during 1960–69 to about $15 billion in 1973. Net investment income then fluctuated erratically higher in general response to global cyclical developments. Moreover, higher earnings of petroleum affiliates resulted both from skyrocketing oil prices, which generated sizable "windfall" profits on inventories as well as higher per-barrel profits on current sales, and from increased production. Growth in net receipts was interrupted in 1975, when the industrial recession shaved company profits in general, and net receipts dropped off to $16 billion, but growth resumed in the subsequent recovery. Particularly after the rise in OPEC oil prices, foreign earnings of the oil industry represented the largest, and a growing, share of overall US net investment income;

Table 1. Changing Structure of the US Current Account
(Balance of payments basis; billions of dollars)

	Average 1960–69	1970	1971	1972	1973	1974	1975	1976	1977
Merchandise trade balance	4.1	2.6	-2.3	-6.4	0.9	-5.3	9.0	-9.4	-31.1
Exports	26.5	42.5	43.3	49.4	71.4	98.3	107.1	114.7	120.6
Agriculture	5.9	7.4	7.8	9.5	18.0	22.4	22.2	23.4	24.4
Nonagriculture	20.6	35.1	35.5	39.9	53.4	75.9	84.9	91.3	96.2
Imports	-22.4	-39.9	-45.6	-55.8	-70.5	-103.6	-98.0	-124.0	-151.6
Fuel	-2.1	-3.2	-4.0	-5.1	-9.0	-27.5	-28.5	-37.1	-47.8
Nonfuel	-20.3	-36.7	-41.6	-50.7	-61.5	-76.1	-69.5	-86.9	-103.8
Balance on services, net	2.1	3.1	4.6	4.3	9.9	14.2	14.1	18.8	20.6
Military, net	-2.7	-3.4	-2.9	-3.6	-2.3	-2.1	-0.9	0.3	1.3
Investment income, net									
Private	4.8	6.3	8.2	10.0	15.1	18.7	16.2	19.2	21.7
Government	0.1	-0.1	-1.0	-1.9	-3.0	-3.2	-3.4	-3.2	-4.2
Travel and transportation, net	-1.3	-2.0	-2.3	-3.0	-3.1	-3.1	-2.5	-2.2	-3.0
Other, net	1.2	2.2	2.5	2.9	3.2	4.0	4.6	4.7	4.7
Balance on goods and services	6.1	5.7	2.3	-2.1	10.8	8.9	23.1	9.4	-10.5
Unilateral transfers: Remittances, pensions, and government grants	-2.8	-3.3	-3.7	-3.9	-3.9	-7.2	-4.6	-5.0	-4.7
Balance on current account	3.3	2.4	-1.4	-6.0	6.9	1.7	18.4	4.3	-15.2

Source: US Department of Commerce. Subtotals may not add because of rounding.

manufacturing industry, commercial banks, and other financial enterprises contribute the remainder. The bulk of our net investment earnings flows from investments in Canada, Latin America, and OPEC.

Offsetting to a modest extent the income from private investment abroad are the US government interest payments to foreign holders of Treasury securities and of special deposits with the Treasury Department. The growth of these interest payments in the 1970s largely reflects the rise in dollar holdings by foreign official institutions resulting from foreign central bank intervention in the exchange markets and from OPEC investments in US securities. Most of our net interest payments to foreigners are made to Western Europe and Japan.

Fees and royalties are an increasingly important source of net income in recent years, generating over $4 billion net in 1977. Fees and royalty income, which makes up by far the largest part of "other net" receipts in Table 1, originate from rentals, from the use of patents, and from professional and management services. Our foreign investment and capital goods exports often affect the kind of technology transfer abroad which in turn generates demand for US technological and managerial expertise. Although Europe is a major source of this income, fees and royalties flow in from all regions.

Among other service items, travel and transportation transactions have consistently registered net payments, which have trended upward over the longer term. The deficit averaged over $1 billion in the 1960s and has fluctuated around $3 billion more recently. Payments on travel and passenger fares behave much like consumer goods imports, responding to rising US per capita income and to changes in relative prices and exchange rates. Payments on freight tend to follow the long-run uptrend in merchandise imports. Finally, United States military transactions have swung around from a net deficit in the 1960s to a growing surplus in the past several years. This shift developed as US military spending in Vietnam wound down and exports of military goods and services, mostly destined for the Middle East, expanded. These receipts are in large part offset by ongoing military payments to Western Europe.

US Trade Structure and Comparative Advantage

The structural characteristics of a nation's trade are an important determinant of trade performance, both in the short run in response to cyclical forces at home and abroad and in the longer run as a reflection of comparative advantage. In a dynamically changing global economy, however, trade structure and comparative advantage do not remain fixed. These structures adapt to the changing requirements of world demand as well as to transformations of the domestic economy. Therefore, a detailed look at the commodity composition and geographic distribution of US trade helps to clarify how structural problems have contributed to our rising trade deficit.

One longer-term structural process affecting US trade performance may well have accelerated with the pace of technological change in a highly integrated world economy. Often termed the "product cycle phenomenon," this rather well documented process describes US leadership in developing a new product or technology that becomes a basis for exports. Once the product or technology has been refined, production often shifts abroad to minimize costs, with multinational enterprises typically operating as the instruments of this process. Consequently what had been initially a net export position in a product may in time shift to a net import position. For the US to maintain our trade performance, then, a new product or technology must appear and trigger another "product cycle."

Evidence of a "product cycle phenomenon" in the structure of US production and international trade can be traced back at least 50 years, with prominent examples including man-made fibers, electrical household appliances, and synthetic rubber. In the process of locating production facilities abroad, especially in recent years, multinational firms have transferred modern technology through direct investment and licensing arrangements to a large number of developing countries as well as to other industrial countries. Thus, the LDCs have emerged in the 1970s as efficient producers of a wide range of standardized manufactured goods, including consumer electronics products, textiles, clothing, shoes, and industrial goods. At the same time, capital-intensive production of automobiles, steel, and certain chemicals has spread widely among some developing as well as industrial countries. This widespread diversification beyond the traditional industrial countries, which carries with it modern production technology in every area of manufacturing, should not be underestimated in planning strategy with respect to US commercial policy, import restraints, export promotion, foreign aid, and international investment.

Meanwhile, the US has moved deeper into high-technology, capital-intensive product lines, such as computers, aircraft, and capital goods, establishing a firm basis for our international comparative advantage. Indeed, US net export surpluses, according to studies based on disaggregated commodity categories, are positively related across industries to human capital per man and to a high research and development content. These findings fit in well with the product cycle phenomenon and help explain the pattern of trade surpluses across commodities. The US appears to have a solid comparative advantage in capital goods and certain chemicals, both of which embody a high R & D content and a high capital intensity, and in agricultural goods. Our comparative disadvantage is in consumer goods and industrial supplies and materials.

Geographic Distribution of US Trade

An examination of US trade disaggregated by major trading areas of the world and by commodity composition will indicate how our trade structure is changing and how it affects the global US trade balance. The data reveal both the cyclical fluctuations in trade and the longer-term developments bearing on US comparative

advantage and the rapidly emerging new foreign supplies of manufactures.

The pronounced deterioration in our trade performance in the 1970s is apparent (Table 2) despite the erratic year-to-year swings between deficits and surpluses. The trade balance fluctuated in response to the worldwide business cycle defined by peaks in economic activity in major industrial countries in late 1973 and 1974, deep recession troughs in 1975, and subsequent recoveries to the present. Economic activity among our trading partners revived with varying strength and progressed along different time paths. Those differences affected bilateral trade balances with major trading partners, particularly the slowdown in the developing world that lagged the recessions in industrial countries. At the peak of the global business cycle in 1974, the overall US trade balance showed a \$5.3 billion deficit and then swung to a \$9 billion surplus during the steep 1975 slide into recession. A deficit reappeared thereafter and widened sharply to \$31 billion in 1977. A good part of the overall trade deterioration has been attributed to the more rapid economic recovery in the US than in other industrial countries and to the lagged slowdown in investment in many developing countries.

One rather surprising observation from our regional balances is that most of the \$31 billion 1977 global deficit on merchandise trade reflects the shortfall in our trade with developing countries, which amounted to almost \$30 billion (Table 2). That negative balance with developing countries was mostly generated by our trade with OPEC, yielding a deficit of almost \$23 billion. That stands in sharp contrast to the nearly balanced trade with OPEC back in 1971, prior to the massive rise in oil import prices and growing US dependence on oil imports. Our trade with developed countries generated a trade deficit of over \$2 billion in 1977, but this masks rather disparate results among individual countries in that group. Trade with Western Europe actually registered a surplus of nearly \$6 billion, which was more than offset by a huge \$8 billion deficit with Japan and a deficit of more than \$1 billion with Canada.

Table 2. US Merchandise Exports, Imports, and Trade Balance by Selected Regions, 1971 and 1974-77
(Billions of US dollars)

	1971	1974	1975	1976	1977
US global trade balance	-2.3	-5.3	9.0	-9.4	-31.1
Developed countries, total	-3.2	3.4	10.5	4.9	-2.5
Canada	-1.3	-0.6	1.8	-0.1	-1.4
Western Europe	0.8	3.9	9.1	8.9	5.4
Japan	-3.2	-1.7	-1.7	-5.3	-8.0
Developing countries, total	0.8	-9.5	-3.9	-17.1	-29.7
OPEC	-0.1	-11.3	-8.9	-15.8	-22.9
Other	0.9	1.5	[illegible]	-1.3	-6.8
Eastern Europe	0.2	0.8	2.5	3.2	1.8
Total US exports to world	43.3	98.3	107.1	114.7	120.6
Developed countries, total	30.3	64.5	66.5	72.3	76.7
Canada	10.9	21.8	23.5	26.3	28.3
Western Europe	13.6	28.2	29.9	31.9	34.1
Japan	4.1	10.7	9.6	10.2	10.[illegible]
Developing countries, total	12.6	32.1	37.4	36.3	41.0
OPEC	2.1	6.[illegible]	10.0	11.6	12.9
Other	10.[illegible]	[illegible]	27.4	26.7	28.1
Eastern Europe	0.4	1.7	3.2	4.1	[illegible]
Total US imports from world	45.6	103.6	98.0	124.0	151.6
Developed countries, total	33.[illegible]	61.1	56.0	67.[illegible]	79.2
Canada	[illegible]	[illegible]	21.7	26.5	29.7
Western Europe	[illegible]	24.3	20.8	23.0	28.[illegible]
Japan	7.3	12.4	11.3	15.5	18.5
Developing countries, total	11.9	41.[illegible]	41.3	[illegible]	70.[illegible]
OPEC	2.3	17.2	18.9	27.4	35.8
Other	9.6	24.3	22.4	28.0	34.9
Eastern Europe	0.2	1.0	0.7	0.9	1.1

Source: US Department of Commerce. Data expressed on f.a.s. transaction basis, excluding military transactions and adjusted to balance of payments basis.

Wide fluctuations in income-sensitive imports in particular contributed to the sharp swings in the US trade balance over the cycle. Total imports dropped from almost \$104 billion (Table 2) in 1974 to \$98 billion in the recession of 1975 and then rebounded in the cyclical upswing to attain almost \$152 billion last year. The 1975 recession dip in imports hit mainly the major industrial countries, whereas imports from OPEC — indeed mostly oil — continued to rise despite the US recession and purchases from non-OPEC LDCs dropped only slightly. During the 1975–77 upswing, more than half the \$54 billion rise in imports came from developing countries, including a \$17 billion increase from OPEC and a considerable \$12 billion jump in imports from nonoil-producing developing countries. These LDCs supplied larger purchases of manufactured goods, as well as raw materials and industrial supplies needed for our recovering industrial production. The remainder of that \$54 billion rise — \$23 billion — came from developed countries, fairly evenly distributed among Canada, Western Europe, and Japan. During the 1976–77 upswing, imports from OPEC soared almost 90 percent, and purchases from Japan and nonoil LDCs climbed well over 50 percent. In sharp contrast, imports from Canada and Western Europe grew by only 35 percent. Thus, Western Europe, which had lost the most in sales to the US during our recession, gained the least in the subsequent economic recovery.

Contrary to the marked cyclical profile of US imports, the value of our exports continued to grow steadily, if slowly, even during the 1975 recession. One reason is that the recession in most of our trading partners was not as severe as that in the US. Moreover, when activity in industrial countries slumped in 1975, developing countries continued to expand their economies. Exports to developing countries even showed considerable strength in 1975, making up for noticeably sluggish sales to Canada and Western Europe and absolute declines in deliveries to Japan. In 1976, however, exports to developed countries picked up; sales to OPEC slowed; and deliveries actually declined to nonoil LDCs, which cut back their economic growth in the face of worsening external positions. With the passing of the initial impetus of economic recovery, US exports grew only sluggishly. During 1976–77, total exports rose by \$13.5 billion, of which \$10 billion went to developed countries, mostly to Canada and Western Europe, and nearly \$3 billion went to OPEC. The value of our exports to Japan increased by \$1 billion in that two-year recovery and sales to nonoil LDCs rose by somewhat more. Despite this nominal growth in export values, export volume in 1977 still failed to rise above the 1974 level. This disappointing export performance over several years, despite the dollar's deep depreciation, has caused some observers to doubt the role of flexible exchange rates in the adjustment process.

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Commodity Composition of US Trade

More can be learned about the sluggish growth of US exports and the rapid rise in imports in recent years by looking at the commodity composition of US trade flows (Table 3), organized according to "end-use commodity categories." Traded commodities are grouped according to how they end up being used in the nation's economy. "Industrial supplies and materials," including fuel, are in general used for current production and respond sensitively to changes in industrial production. "Capital goods," such as machinery and trucks, are used in business investment and construction, with sales depending on changes in the investment climate. "Consumer goods" — household products, appliances, clothing, and automobiles — satisfy the final demands of the household sector, and purchases follow fluctuations in disposable personal income.

Looking at the commodity composition of the US deficit in 1977 gives a broad picture of where our comparative advantage lies. The strength of our international trading position is solidly founded on exports of capital goods and "food and feeds," where the US earned surpluses of $25 billion and $6 billion, respectively. These net earnings on merchandise exports, however, were insufficient to purchase all the consumer goods and industrial supplies and materials desired by the American economy. Consequently, deficits on consumer goods and automobiles ($19 billion) and fuel ($43 billion) resulted in an overall trade deficit of almost $31 billion.

Spurred by the 1976–77 upswing in US economic activity, our merchandise deficit worsened by over $40 billion with the ballooning trade imbalance in fuels accounting for about half, or some $20 billion. Fuel imports had continued to grow even during the 1975 recession and then surged ahead in the US economic recovery. The balance of trade on income-sensitive consumer goods behaved in expected cyclical fashion: the deficit narrowed in the recession when imports declined and then steadily deepened during 1976–77 when imports rebounded with the expansion of incomes, contributing about a fourth of the deterioration in the deficit.

In sharp contrast, capital goods, the mainstay of US export performance, registered a large surplus throughout the period. In fact, capital goods exports advanced strongly even in 1975, despite the recession in the industrial world, reflecting mainly the continuing demand for US investment goods by OPEC and other developing countries. As investment demand in the developing world slackened and the postrecession revival of investment in the industrial countries proceeded at best sluggishly, expansion of our capital goods exports slowed markedly. Consequently, the trade surplus in this category began to shrink in 1977. Agricultural trade (foods, feeds, and beverages), the other important bulwark in the US export position, contributes a significant surplus to our overall trade balance. That surplus declined substantially from 1975, however, reflecting a weakening of certain agricultural prices that held down our export values, while imports rose, in part because of higher prices of coffee and other consumer products.

Table 3. US Exports, Imports, and Trade Balance by Selected End-Use Commodity Categories
(Billions of dollars)

	1971	1974	1975	1976	1977
US global trade balance	-2.3	-5.3	9.0	-9.4	-31.1
Foods, feeds, and beverages	-0.3	8.0	9.5	8.2	5.8
Industrial supplies and materials	-4.8	-24.5	-21.3	-32.5	-46.5
Fuels and lubricants	-2.3	-23.9	-23.8	-32.4	-43.1
Capital goods, including trucks and buses	10.9	20.9	26.4	26.6	25.7
Automobiles, including parts and engines	-2.7	-3.5	-1.2	-4.3	-5.8
Consumer goods, excluding autos and food	-5.5	-8.0	-6.6	-9.2	-12.9
Total exports to world	43.3	98.3	107.1	114.7	120.6
Foods, feeds, and beverages	6.1	18.6	19.2	19.8	19.8
Industrial supplies and materials	12.7	30.1	29.9	32.1	34.5
Fuels and lubricants	1.7	3.6	4.7	4.7	4.7
Capital goods, including trucks and buses	15.4	30.9	36.7	39.1	39.8
Automobiles, including parts and engines	4.7	8.6	10.6	12.1	13.0
Consumer goods, excluding autos and food	2.9	6.4	6.6	8.0	8.9
Total imports from world	45.6	103.6	98.0	124.0	151.6
Foods, feeds, and beverages	6.4	10.6	9.7	11.6	14.0
Industrial supplies and materials	17.5	54.6	51.2	64.6	81.0
Fuels and lubricants	4.0	27.5	28.5	37.1	47.8
Capital goods, including trucks and buses	4.5	10.0	10.3	12.5	14.1
Automobiles, including parts and engines	7.4	12.1	11.8	16.4	18.8
Consumer goods, excluding autos and food	8.4	14.4	13.2	17.2	21.8

Source: US Department of Commerce. Data expressed on f.a.s. transaction basis, excluding military transactions and adjusted to balance of payments basis.

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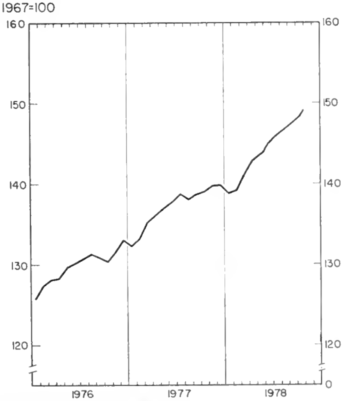
1979 — A Lagging Economy

Economic activity during 1979 will reflect the convergence of numerous forces. One set of forces is a legacy from the past — about which nothing can be done. It includes an accumulation of expansive monetary policy, an entrenched spiral of inflation, an unusually high level of unused resources, and a large adverse balance of trade. Another set of forces is not fully determinable at this time, but will emerge as the year unfolds. It includes monetary and fiscal actions to be taken during 1979, consumer and business responses to the business environment as it takes shape, and one or more unexplainable "shocks" — a winter storm, a strike, an embargo, and so on — that have a way of surfacing from time to time.

The central question for the coming year is whether there will be a recession. There is a widely held view that forces have been set in motion that can, at length, weaken the economy — barring major shifts in government economic policy or private attitudes.

A first step toward evaluating this question is to gauge the strength of those forces already dominating the economic scene. Following this, it is useful to speculate about prospective government policy initiatives and potential shifts in consumer and business response patterns.

Industrial Production



Bureau of Economic and Business Research

Recent Economic Developments

Business activity expanded less rapidly last year than in previous years of the current economic expansion. Real gross national product — that is, GNP adjusted for changes in prices — rose 3.5 percent in the year ending in the third quarter of 1978 (the latest quarter for which data are available). In the two preceding years, real GNP rose 4.6 percent and 5.3 percent (1976 and 1977, respectively). The slower growth in activity can be traced to a marked reduction in the growth of investment coupled with a reduced growth in government spending. Investment spending rose 13 percent from the third quarter of 1977 to the third quarter of 1978; however, after adjusting for inflation, investment increased only 4.3 percent. In the preceding year, investment expanded nearly 24 percent — with real increases of nearly 14 percent. Business investment is undertaken in the light of businessmen's views regarding future profits. It is believed that uncertainty regarding inflation, government policy, and a host of other factors tends to retard investment. In turn, shifts in investment tend to lead to larger swings in the economy.

Government spending rose just over 10 percent last year, nearly one percentage point lower than in the preceding year. However, it would be misleading to regard

US Current Account in Structural Change: II By R. D. [illegible] Page 9

the slowdown in government spending as evidence of fiscal policy — even though the direction of change has been appropriate to the economic environment. Changes in government spending occur as a result of explicit spending initiatives or cutbacks, or as a consequence of the natural growth or decline of programs. These changes occur at both the federal level and the level of state and local governments.

Consumer spending rose more rapidly last year than in earlier years of the current economic expansion. Consumers increased their outlays 11.7 percent in 1978, compared with increases of 10.6 percent and 10.5 percent in 1976 and 1975, respectively (each year-over-year change is on a third-quarter basis). In real terms, however, consumer gains have diminished since 1975. Put differently, inflation has taken a successively larger share of the consumer dollar in each of the past three years.

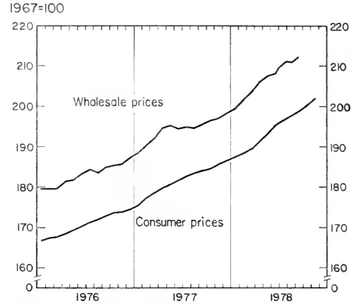
The slowdown in economic activity is not in evidence from an examination of production statistics. Industrial production increased 7.3 percent in 1978 (12-month period ending in November), somewhat more rapidly than in the two preceding years. Partly neutralizing the rise in industrial output, however, construction activity was essentially flat last year.

Similar to production trends, employment statistics do not reveal a weakening in the economy. Employment rose 3.8 percent in the year ending in November 1978. This rise was little changed from the 3.7 percent average annual rate of employment growth since April 1975. Reflecting the strong rise in employment, unemployment dropped nearly a full percentage point in 1978.

The rate of inflation accelerated in 1978. Consumer prices rose nearly 9 percent and producer prices rose 9.5 percent. In the preceding three years, consumer prices rose at a 6.3 percent average annual rate and producer prices rose at a 4.6 percent rate. A strong surge in farm and food prices led the advance in producer prices. In 1978 food prices rose nearly 15 percent, after edging upward at a 3 percent rate from late 1973 to the end of 1977.

Interest rates jumped sharply in 1978, reflecting the acceleration in inflation. Interest rates on short-term securities — such as Treasury bills and commercial paper — rose about four percentage points, while rates on longer-term instruments — such as corporate or Treasury bonds — rose about one percentage point. It is not unusual for short-term interest rates to undergo wider swings than long-term rates.

Prices



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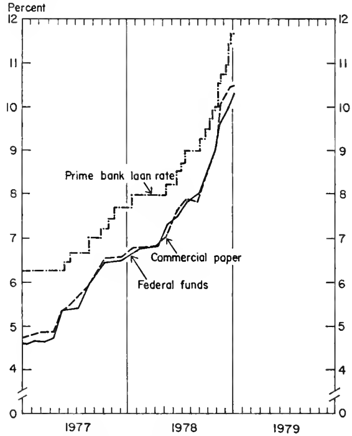
Interest Rates



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In the past several months, interest rates have stabilized. Since mid-November, most interest rates have edged higher, but more slowly than in the July–November period. Whether this stability will prove to be short-lived is a chief question in evaluating the current economic scene.

Monetary Policy Developments

Monetary growth was very rapid last year — as dur-

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ing the past several years. However, in recent months the money supply has stopped growing. In part, the significance of this development depends upon why it has occurred; in part, its significance depends upon how long it persists.

The money supply (M_1) expanded nearly 8 percent in the year ending in October, unchanged from the growth rate that had prevailed over the two preceding years. Since October the money supply has declined on balance. This same pattern has been traced by other monetary aggregates — such as M_2 (the money supply plus time deposits).

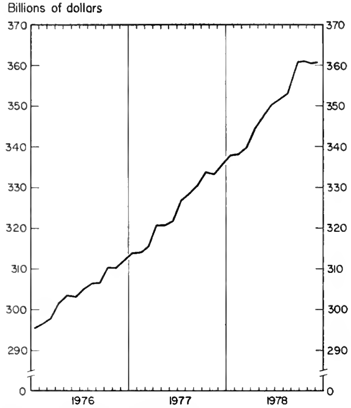
It is not unusual for monetary growth to decline from time to time — with prolonged periods of expansion punctuated by brief periods of decline. Typically, short-term declines in money supply data have little significance. They may reflect data problems — inadequacies in the sample, seasonal adjustment difficulties, and so forth; they may reflect short-run shifts in the economy; they could reflect explicit policy actions of the Federal Reserve.

A protracted period of monetary deceleration is quite likely to be of substantial significance. Here again, however, its significance depends upon the cause of the monetary decline.

The crucial question is whether the change in monetary growth is a result of a policy initiative or is a reflection of a shift in the economy. If the monetary change represents a change in policy and if that policy change persists, we can expect the economy to be weakened. Indeed, that would be the purpose of the policy. If the monetary change is a reflection of the economy, then the economy has already weakened.

To differentiate between the cause of change is extremely difficult. Generally, we would expect to see an explicit monetary tightening to be accompanied by an upward movement in interest rates. In contrast, monetary deceleration accompanied by a decline in interest rates is likely to reflect a weakening in the economy.

Money Supply



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The Outlook

It is my view that business activity will weaken in 1979. Indeed, the slowdown in monetary growth along with the stability in interest rates suggests that the weakening has already begun. However, statistics relating to economic developments provide little, if any, corroborating evidence of economic recession.

Consistent with this overall view, I project a real increase in the economy of about 2 percent. Notwithstanding the weakening in the economy, the rate of inflation will accelerate. With an inflation rate of 8 percent, a 10 percent rise in gross national product will be forthcoming.

Other elements of our economy with a growth rate of 2 percent include a slower growth in employment and stability in the unemployment rate. Thus, as the year unfolds we will find that the unemployment rate will remain near 6 percent.

Interest rates will remain high during 1979, reflecting the tenacity of inflation. With an 8 percent rate of inflation, we can expect interest rates to remain near their present level. If credit demands were to diminish markedly — an unlikely prospect — we would expect competitive pressures to force financial institutions to lower some of their lending rates, such as the prime rate. Even if this were to happen, a prime rate below 10 percent any time during the year would be unlikely.

In short, the remainder of 1979 will not be substantively different from the last few months of 1978. An economic policy response will not be formulated. Indeed, much of the year will have become history before a consensus forms regarding what has happened. Because the economic change will impinge subtly, until late in the year consumers will be generally unaware that the environment has been altered. A constrictive consumer response in late 1979 will have a markedly adverse consequence on the 1980 economy.

WILLIAM R. BRYAN

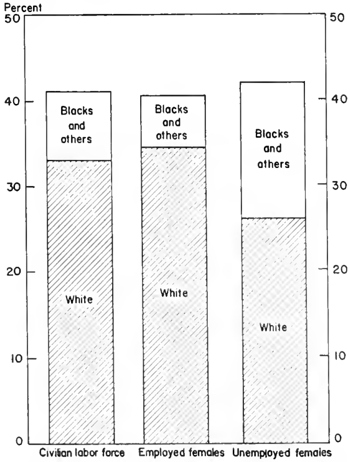
Local Illinois Developments

Female Labor Force Participation

Even though the stereotype statistical family still consists of a male head-of-household, a nonworking wife, and two school-age children, women can no longer be considered "secondary" workers in Illinois. Females constitute over 40 percent of the civilian labor force in Illinois, compared with the national figure of 38 percent. More important, adult females account for 62 percent of the 10 million new entrants into the US labor force in the past 4 years. Data from the Illinois Bureau of Employment Security indicate that the Chicago SMSA presents a reasonably accurate indication of female employment for the entire State. Moreover, state data are believed to be significantly similar to national trends in female labor force participation rates.

By the fall of 1978, for the first time, more than one-half of the adult females in the US had joined the labor force. According to the *Handbook of Labor Statistics,* female labor force participation rates in the mid-1950s reached 37 percent, rising gradually through the 1960s and accelerating in the 1970s with annual increases of at least 1 percent. The male labor force participation rate has declined over the past 20 years from 88 to 80 percent, most likely as a result of better retirement and disability benefits. Married women represent the largest increase in female participation in the past 10 years (15 percent for married women, age 20–35, slightly less for those 35–44).

Adult Female Employment Status[a] — 1976 Annual Average



[a] Based on Chicago SMSA data which include Cook, Du Page, Kane, Lake, McHenry, and Will counties.
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Illinois Business Indexes

Item	Oct. 1978 (1967 =100)	Percentage change from Sept. 1978	Percentage change from Oct. 1977
Employment-manufacturing[1]	88.0[a]	-1.5	+0.1
Weekly earnings-manufacturing[1]	218.7[a]	-1.3	+4.6
Consumer prices in Chicago[2]	195.4	+0.8	+9.3
Life insurance sales (ordinary)[3]	286.8	+6.4	+12.0
Retail sales[4]	238.8[a]	+7.1	+9.2
Farm prices[5]	226.0	+5.1	+24.8
Building permits-residential[4]	120.4	+7.3	+12.6
Coal production[6]	111.7	+12.8	+15.3
Petroleum production[7]	39.8	+3.1	-8.3

[1] Ill. Dept. of Labor. [2] US Bureau of Labor Statistics. [3] Life Ins. Agcy. Manag. Assn. [4] US Dept. of Commerce. [5] Ill. Crop Rpts. [6] Ill. Dept. of Mines. [7] Ill. Geol. Survey.

[a] Preliminary.

Minority women represent a disproportionately large share of the unemployed females in Illinois (see the chart). Approximately 8 out of every 10 adult female labor force participants are white, yet blacks and other minority females still account for about 40 percent of the unemployed women. Women in the city of Chicago retain a slightly higher percentage of the civilian labor force than the rest of the State, but with higher rates of unemployment. Nearly 41 percent of all the women actively seeking employment in Illinois held jobs in 1976. The majority of these women were employed in clerical or sales occupations.

The economic pressures of inflation are most often cited as the major reason for females entering the labor force. One might also suppose that the availability of convenience foods and appliances have reduced the domestic role, allowing more females to take part- or full-time jobs.

Despite increasing employment, females are not keeping up in terms of relative income. The median income of females in the US is only 61 percent of the male income figure. This may be explained in part by the increasing number of untrained women entering the labor force. About one-fourth to one-third of the gap between male and female wages can be explained by differences in work, schooling, and participation rates. Concentration of females in lower-paying fields, even in professional and technical jobs, may also explain the lower median income. These differential income levels should narrow, given recent occupational trends which find the number of females in higher-paying professions rising rapidly.

Comparative Economic Data for Selected Illinois Cities, October 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$ 160,17[illegible][a]	3,554.9[a]	$ 50,902[a]	4,780.6	5.6
Percentage change from	Sept. 1978	+41.[illegible]	-8.6	-4.[illegible]		
	Oct. 1977	+73.[illegible]	+9.[illegible]	+7.[illegible]		
NORTHERN ILLINOIS						
Chicago		$ 105,894	1,751.6	$ 39,729	3,258.3[b]	5.3[b]
Percentage change from	Sept. 1978	+95.9	-6.3	-4.3		
	Oct. 1977	+113.[illegible]	+4.9	+6.5		
Aurora		$ 6,179	160.7	$ 625	38.2	4.4
Percentage change from	Sept. 1978	+32.4	+0.9	-10.9		
	Oct. 1977	+34.3	+38.8	+28.8		
Elgin		$ 2,449	115.2	$ 658	27.9	5.1
Percentage change from	Sept. 1978	+45.7	-7.6	-8.7		
	Oct. 1977	+94.8	+52.7	+17.1		
Joliet		$ 7,355	379.7	$ 344	46.7	5.1
Percentage change from	Sept. 1978	+335.2	-5.3	-12.2		
	Oct. 1977	+19[illegible]	+10.8	+11.3		
Kankakee		$ 1,495	73.5[c]	$ 257	37.8[b]	8.0[b]
Percentage change from	Sept. 1978	+196.9	-11.2	-0.3		
	Oct. 1977	+58.8	+11.8	+29.7		
Rock Island-Moline		$ 7,445	119.2[d]	$ 1,256	176.0[b]	4.1[b]
Percentage change from	Sept. 1978	+286.[illegible]	-17.7	+4.8		
	Oct. 1977	+337.4	+7.2	+21.4		
Rockford		$ 3,451	162.7	$ 915	131.9[b]	5.0[b]
Percentage change from	Sept. 1978	+36.5	-4.8	+3.3		
	Oct. 1977	+21.9	+12.1	+19.1		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 3,951	45.4	$ 918	61.9[b]	3.2[b]
Percentage change from	Sept. 1978	+2.3	-24.8	-6.5		
	Oct. 1977	-12.4	+7.8	+14.3		
Champaign-Urbana		$ 1,889	50.5	$ 661	74.9[b]	4.2[b]
Percentage change from	Sept. 1978	-88.8	-15.5	-10.7		
	Oct. 1977	+0.9	-3.0	+6.9		
Danville		$ 860	44.9	$ 233	19.4	6.8
Percentage change from	Sept. 1978	-34.9	-9.4	-2.9		
	Oct. 1977	+81.4	+10.3	-39.7		
Decatur		$ 4,523	120.3	$ 486	58.6[b]	5.8[b]
Percentage change from	Sept. 1978	+22.9	-11.2	-3.3		
	Oct. 1977	-8.5	+12.5	+2.4		
Galesburg		$ 964	30.7[c]	$ 146	16.7	5.6
Percentage change from	Sept. 1978	+25.8	-13.0	-17.9		
	Oct. 1977	-29.1	+9.6	+0.6		
Peoria		$ 3,118	194.8	$ 1,340	171.1[b]	4.3[b]
Percentage change from	Sept. 1978	-21.6	-15.5	-4.8		
	Oct. 1977	-23.7	+11.3	+4.8		
Quincy		$ 445	40.3	$ 253	21.1	5.7
Percentage change from	Sept. 1978	-35.7	-9.2	+0.7		
	Oct. 1977	+25.7	+5.2	+22.2		
Springfield		$ 4,412	97.7	$ 1,991	92.2[b]	5.6[b]
Percentage change from	Sept. 1978	-64.0	-23.6	-3.0		
	Oct. 1977	-36.7	+1.1	+13.1		
SOUTHERN ILLINOIS						
East St. Louis		$ 68	27.5	$ 234	22.6	9.5
Percentage change from	Sept. 1978	[illegible]	-3.5	+32.[illegible]		
	Oct. 1977	[illegible]	+6.5	+47.1		
Alton		$ 3,381	81.3	$ 141	15.3	6.1
Percentage change from	Sept. 1978	+161.3	-2.9	-4.[illegible]		
	Oct. 1977	+23.1	+23.[illegible]	+25.8		
Belleville		$ 1,742	25.1	[illegible]11	14.7	4.[illegible]
Percentage change from	Sept. 1978	+338.[illegible]	-27.6	[illegible]		
	Oct. 1977	[illegible]	+4.[illegible]	[illegible]		
Carbondale-Murphysboro		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percentage change from	Sept. 1978	[illegible]	-1[illegible]	+3.[illegible]		
	Oct. 1977	-3[illegible]	+7.[illegible]	+3[illegible]		

[1]Local sources; data include federal [illegible]. [2][illegible] companies. [3]Local post office reports; accounting period ending 3 November 1978. [4]Illinois Department of Labor; preliminary.

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory.

[d]Includes East Moline.

The Illinois Dairy Industry

Prices for dairy products are rising. On the supply side, Illinois milk producers are finding that the opportunity cost of producing milk instead of beef is rising, and are responding accordingly. On the demand side, consumers are using dairy products such as cheese as protein substitutes to replace high-cost beef. As the demand for cheese increases, cheese and fluid milk processors are competing for the available raw milk supplies, driving up the price of raw milk for the dairy industry as a whole.

Consumption Trends

Illinois residents have joined the currently popular "get-in-shape" trend sweeping the country by consuming proportionately less whole milk in the last decade. In the mid-1960s, whole milk dominated the market. Now, 2 percent milk is "more than just a price item." According to one of the largest milk processors in the State, the composition of milk consumption in Illinois in the past 10 years went from 70 percent whole milk (30 percent less-than-whole milk) to 70 percent less-than-whole milk consumption. In 1977, state residents consumed approximately 80 percent of the fluid milk processed in Illinois, of which about 14 percent was delivered to homes, 63 percent sold to supermarkets, and 4 percent distributed to school systems. The remainder was shipped for out-of-state consumption or sold to wholesale outlets (restaurants, nursing homes, hospitals). The share of fluid milk in the US dairy industry rose to 57 percent in 1976, but reached only 42 percent in Illinois.

Production and Processing

Dairy farming is becoming a thing of the past in Illinois as farmers are finding it more profitable to produce soybeans and corn than to raise dairy herds. Estimates from the Department of Dairy Science at the University of Illinois are an indication of this trend. In 1971 there were 12,286 dairy herds in Illinois; today there are only 7,588. This trend is most striking in Champaign County, where the number of dairy herds dropped from 46 to 21 in the past six years.

Illinois cows (predominantly Holsteins) produce approximately 15 to 20 percent of the raw milk processed in the State. Translated into 1977 figures, 234,000 milk cows produced 2.48 million pounds of raw milk, or approximately 2 percent of the total milk produced in the US. The rest of the milk processed in Illinois is shipped by truck from Wisconsin, the largest milk producer in the country (1.8 million cows producing a little over 21 million pounds of milk, or 17 percent of the national total). Associated Milk Producers Incorporated, a regional marketing agent in Illinois, controls the supply and distribution of raw milk on the Illinois market.

In the past five years, more milk was produced during the spring and summer than in fall and winter. Of the total 120,356 million pounds of milk produced in the US in 1976, 54 percent (63,270 million pounds) was produced from March to August, and 46 percent (57,085 million pounds) was produced during the remainder of the year. To attribute these figures to seasonal variation, however, may be misleading. Although weather may affect milk production somewhat, according to the U of I Dairy Science Department, weather is less influential in the milk production process than the calving season. The apparent surplus resulting from increased raw milk supplies during spring and summer and a decrease in demand of approximately 4 percent when schools begin summer vacation and soft drink consumption increases is absorbed by the processing of dry milk. Total dry milk production in the US in 1976 reached 1,004.3 million pounds. Dry milk is used in cottage cheese, yogurt, and other cultured products.

Raw milk is sold to Illinois dairy processors on the basis of butterfat content. On the average, incoming raw milk has the butterfat content of whole milk (approximately 3.25 percent). Butterfat removed to make less-than-whole milk is put into ice cream and butter production. Cyclical variation in butterfat content results from the milk production process. As milk production declines, butterfat secretion also declines, but at a decreasing rate, so butterfat content is higher during periods when milk production is low.

Recent figures indicate that, on the basis of butterfat content, it costs Illinois fluid milk processors approximately $1.00 per gallon for raw milk. In response to market conditions, the bid price for raw milk has been rising lately as cheese is competing for a larger share of the raw milk market. Processing, packaging, transport, and retailing costs are added to the raw milk bid price at later stages of production and distribution; such costs constitute somewhat less than half the price of a gallon of milk sold in the supermarket. The costs attributable to waste due to damage in transportation and due date expiration have been estimated at less than 1 percent of the total cost by a leading milk processor, and are not considered significant.

The market value of fluid milk shipments in the US remained relatively stable from 1975 to 1976, increasing by only 2 percent. However, since butterfat is the basis of cost to the processor, the market values of high-butterfat-content products such as ice cream and creamery butter have increased more than the average (11 and 15 percent, respectively).

Employment Trends

The dairy industry employed 0.7 percent of the Illinois labor force in 1976 (9,400 employees). This compares with 2.4 percent of the labor force employed by the dairy industry in the US. As economies of scale have been achieved in the Illinois dairy industry, there is evidence of declining employment in fluid milk processing (2 percent from 1975 to 1976) as the smaller Illinois dairies are closing down. Major dairy firms in Illinois include Meadow Gold, Borden, Prairie Farms, Dean, and Hillfarm.

SUSAN LINZ

The *IBR* this month presents the second of two parts of Dr. Richard D. Bartel's analysis of changes in the balance of payments position of the United States since 1970. This part will complete the analysis and examine the implications of the changes. The views expressed in this paper are solely the author's and are not intended to represent or reflect the views of congressional members of the Joint Economic Committee or its professional staff.

Dr. Bartel is an economist with the Special Study on Economic Change, Joint Economic Committee, US Congress. Prior to joining the SSEC, from 1969 to 1978, he was an economist in the International Research Department and the Foreign Department of the Federal Reserve Bank of New York. Dr. Bartel received his Ph.D. in economics from Columbia University, where he served as an instructor from 1965 to 1969.

The US Current Account in Structural Change: II
Policy Issues and Options

RICHARD D. BARTEL

The international economic transactions of the United States since the early 1960s, discussed in the December issue of this *Review,* reveal structural changes in the current account. The collapse of the US trade surplus and its plunge into deep deficit in recent years have been offset in part by the rapid rise in the surplus on service transactions. The extent to which these changes are transitory or a more permanent structural feature of our international economic affairs remains to be seen. Nevertheless, both the causes for the changes, and the focus for corrective policies, lie in several broad areas: (1) the competitive position of US goods in world markets; (2) the adjustment of US industries to the rapid development of manufacturing export industries in developing countries; (3) the pattern of relative growth rates among the United States and its trading partners; and (4) the rising price of oil and the associated deterioration in the US external terms of trade. Because of the complexity of these economic forces and their interaction, economic analysts are hard pressed to assign precise weights indicating their relative contribution to the overall current account deficit. Equally difficult is the task confronting policymakers. Measures must be designed to correct the external imbalances in ways which are compatible with our domestic economic goals and our international responsibilities as the world's leading economy. This article considers international policy issues in the light of recent current account developments. It distinguishes the short-term outlook for a significant improvement in our trade account from the longer-term difficulties rooted in our international competitive position and in our adjustment to a rapidly changing global structure of production in which developing countries will be playing an ever more important role.

US International Competitive Position

The deteriorating trade balance in manufactures in particular has naturally raised questions about our competitive position in the world economy. This country's international competitiveness is broadly relevant to both our exports and imports. Those economic characteristics which enable US goods to penetrate and maintain their position in foreign markets are also important in holding our markets at home against encroachment by foreign imports. The structure of US production costs and prices relative to those in other countries is an obvious economic factor underlying our competitive position. Other more intangible characteristics include product quality and reliability, the availability of service and maintenance, delivery time, product adaptability to foreign uses, and government programs for export promotion and financing. The capital- and technology-intensive quality of many US manufactures are clearly a firm foundation for this country's competitiveness in recent years, as evidenced by our export performance in aircraft, computers, and certain chemicals and machinery.

In a dynamically changing world, however, technology spreads rapidly, and a country's competitiveness and comparative advantage in exportables change over time. A ranking of traded goods shows that some prominent exports of the past (steel, for example) have become important imports of the present. Thus the recent erosion of our manufactures trade surplus poses questions as to whether the US is losing its comparative advantage in certain important manufactures to other industrial and/or developing countries. If so, we can remain competitive in a dynamically changing world so long as industry develops new products and processes which can be exported to replace those products which are rapidly being produced and exported elsewhere.

There are two aspects to the US competitive position. On the export side, US producers strive to maintain their shares in the markets of our major competitors — Germany and Japan, for example — and in third countries, such as the developing world. On the import side US producers, even if they sell only to the American market, confront competition from foreign imports whether they are from developed or developing countries. If the economy loses productive efficiency, it risks losing not only our share of foreign markets, but import-competing industries become more vulnerable to imports from abroad. Changes in dollar exchange rates, and real economic adjustments to them, may come too late to prevent at least a short-term deterioration in our international competitiveness.

Moreover, in a highly inflationary environment, if rising domestic production costs squeeze profits and depress the rate of return on capital, US firms may choose to locate production abroad and perhaps serve the US market with imports produced by their foreign affiliates. In fact, the transfer of technology to developed and developing countries through direct investment or the sale of patents and licenses to produce is one of the noteworthy developments reflected in our current account data. Ultimately, these US-sponsored production facilities abroad may be the source of manufactured imports that displace domestic producers.

The combination of modern technology with low production costs in developing countries provides an absolute cost advantage which is difficult for mature industrial

Table 4. US Trade with Seven LDCs
(Millions of dollars)

	Exports		Imports		Trade balance	
	1970	1977	1970	1977	1970	1977
Singapore	240	1,172	81	875	159	297
Philippines	373	876	472	1,103	-99	-227
Korea	643	2,371	370	2,895	273	-524
Hong Kong	406	1,292	944	2,916	-538	-1,624
Taiwan	527	1,798	549	3,681	-22	-1,883
Subtotal (a)	2,189	7,509	2,416	11,470	-227	-3,961
Mexico	1,704	4,806	1,219	4,685	485	121
Brazil	841	2,482	670	2,246	171	236
Subtotal (b)	2,545	7,288	1,889	6,931	656	357
Total, (a) + (b)	4,734	14,797	4,305	18,401	429	-3,604
Japan	4,652	10,522	5,875	18,623	-1,226	-8,101

economies to match. Indeed, the emergence of the nonoil LDCs as important exporters of manufactures is one of the most dynamic developments in the world economy in the 1970s. That this has an important bearing on US competitiveness is borne out in US trade statistics with seven LDCs — Korea, Taiwan, Hong Kong, Singapore, the Philippines, Brazil, and Mexico (Table 4). Even as these countries have become significant producers and exporters of capital equipment, chemicals, finished metals, consumer durables and nondurables, and textiles, they have also become important markets for US exports. The five Asian LDCs alone represent a growing market for US exports that rapidly approaches the size of Japan in terms of the value of US exports in 1977. In fact, adding our exports to Brazil and Mexico, these seven LDCs purchased more US goods than did Japan. Further, these seven countries supplied the same value of imports into the US in 1977 as did Japan. Moreover, the growing competitiveness of the LDCs is underscored by the fact that the US share in Japanese manufactured imports has declined substantially since the late 1960s, whereas developing Asian countries have increased their shares.

In addressing the questions about US competitiveness, government analysts and private researchers have responded with apparently contradictory conclusions. Such evaluations are difficult and sometimes ambiguous because a nation's competitiveness can be defined and quantitatively measured narrowly or broadly. A commonly used, but narrow, definition focuses on changes in US prices and costs, adjusted for fluctuations in dollar exchange rates. Such an approach usually compares movements in US export prices, unit labor costs, and consumer and wholesale prices with corresponding movements in indexes of our major international competitors, such as Japan, Germany, and other European countries.

The pattern of relative price trends that emerges is usually dominated by fluctuations in dollar exchange rates since 1970. According to this conventional approach, the US has gained a notable competitive advantage in terms of relative price performance. Our competitiveness improved from 1970 to 1973, then deteriorated somewhat from early 1975 to mid-1976, and has improved dramatically since mid-1976. These time periods correspond roughly to the dollar's broad swings in the foreign exchange markets, beginning with the two devaluations of 1971 and 1973, that were partly negated by a sizable appreciation in 1975 and early 1976. Resuming its decline in mid-1976, the dollar continued to depreciate thereafter, falling sharply in 1977–78 on balance, even despite the temporary rebound following announcement last November of President Carter's measures to defend the US currency. With the dollar still vulnerable in the foreign exchange markets, the dollar's cumulative depreciation from 1970 through 1978 amounted to somewhat over 40 percent against the Japanese yen, 45 percent against the German mark. In that time, the dollar lost almost 24 percent on a weighted average basis, according to the Federal Reserve Board's index of the dollar's exchange value against the currencies of 10 major industrial countries.

Conclusions about the gains in US price competitiveness relative to other major industrial countries, however valid they may be, still neglect the changing position of the manufacturing LDCs. The latters' price statistics rarely appear in the competitiveness indexes. Even if movements of relative prices and costs of LDCs had been incorporated into these indexes, the conclusions may still not accurately depict changes in competitiveness over time for the following reasons. The absolute levels of cost and prices among industrial countries are roughly similar, so that relative movements in their indexes (adjusted for exchange rate fluctuations) may be a useful guide to changes in relative price competitiveness, particularly for standardized manufactures. For the LDCs, however, absolute production costs and wages (converted at current exchange rates) usually lie substantially below corresponding levels in industrial countries. Even though the LDCs have experienced rapid increases in costs and prices during the 1970s, the *levels* still lie substantially below those in industrial countries. The problem of competitivenes faced by the US and other industrial countries is more one of absolute cost advantages enjoyed by the LDCs rather than a deterioration caused by differential rates of cost and price inflation. Besides, the LDCs lie outside the international adjustment process to the extent that they peg their exchange rates to the US dollar. Consequently, dollar exchange rates vis-à-vis the currencies of manufacturing LDCs have not adjusted to reflect their recently increasing absolute cost advantages, whereas the dollar/yen rate has adjusted to correspond better to the changing real cost and trade relationships between the US and Japan.

Policy Implications

The unprecedented deterioration of the US current account in the 1970s and the associated dollar depreciation raise serious questions about basic US economic policy over the longer term. The foregoing analysis of the long-term structural changes in the current account highlighted some of the complex forces operating on US trade over a number of years. Underlying the soaring trade deficit are certain economic distortions that lie clearly within the policy province of the federal government — US stagflation, energy policy, and export competitiveness for example. Certain fundamental problems of a global nature — sluggish growth and sagging invest-

ment demand abroad — are beyond the *direct* reach of US policy, however. Therefore, achieving a significant contraction in the trade deficit will take time and require a mix of policy measures which addresses the specific causes of the trade deterioration. No simplistic policy will guide us speedily to an acceptable external equilibrium, since a narrow course must be charted between resurgent inflation on the one hand and the risk of serious recession on the other.

Just as cyclical divergencies between the United States and our major trading partners contributed to the soaring US trade deficit in 1977–78, cyclical forces even now appear to be narrowing the underlying trade deficit expected in 1979. During the 1970s, the US growth rate significantly surpassed those of our trading partners, and this constellation of relative growth contributed to our huge trade deficit. By contrast, US growth in the 1960s had been slower than in other major OECD countries, helping to generate our trade surpluses during those years. Current prospects for growth in 1979 suggest a reversal of the pattern of recent years, and the United States, according to the prevailing consensus among forecasters, is expected to grow at roughly half the average rate expected in other OECD economies. Slower US growth would dampen the recent rapid rise of imports across a wide range of raw materials, processed goods, and manufactures, including consumer goods. This course, even though it brings a potential payoff of a sizable drop in imports, clearly risks a serious domestic recession with very high costs in unemployment. At the same time, more rapid expansion in OECD countries would spur our recently sluggish exports.

The export side of a corrective trade policy is often debated in the context of a so-called "locomotive" or "convoy" approach to accelerate global economic growth and exports. While the United States clearly has within its policy reach the power to dampen imports, our influence on exports through more rapid income growth abroad can be only indirect. Our government may persuade Germany and Japan to accelerate their growth, and thereby stimulate purchases of US exports. We cannot, however, compel them to reflate. Even more critical is the extent to which Japanese and German fiscal stimulus actually spills over into demand for US exports, either directly, or indirectly through multiplier effects on third countries. On the basis of the structure of US trade with Germany and Japan, it may be unduly optimistic to expect fiscal stimulus to generate a large and immediate impact on aggregate US exports. Further, fiscal stimulus in OECD countries is likely to affect public sector employment, infrastructure investment, and consumer spending, all of which will do relatively little for US capital goods exports, which dominate our manufactures trade with those countries. Finally, that caution against overoptimism is warranted is suggested by recent econometric evidence in foreign growth as a spur to US exports. A number of independent computer simulations indicate that the US might expect an improvement in the trade balance on the order of several billion dollars annually resulting from increases of from 1 to 1½ percentage point in the GNP growth of major OECD countries. This is a fairly modest correction in a $30–35 billion trade deficit.

The issue of relative growth rates between the United States and its trading partners is important in another, structural respect. Even if the United States and its important trading partners were to grow at the same rates, according to some economists, the US trade balance may still tend to move toward deficit, because of the relationship between import and export elasticities among the trading partners. For example, the US import elasticity with respect to domestic GNP growth is *greater* than the export elasticity with respect to foreign income growth, while Japan's import elasticity with respect to domestic GNP growth is *less* than its export elasticity with respect to foreign growth. Thus, to get balance or a surplus in US trade requires foreign growth to be more rapid than US growth.

Export growth in response to macroeconomic stimulus to foreign growth acquires another dimension when we consider the markets among developing countries. It is astonishing to realize that in 1977 US exports of manufactures (excluding agricultural and fuel trade) to non-OPEC *developing* countries alone were more than four times our manufactured exports to Japan and roughly equal to manufactured exports to all of OECD Europe. Thus, in a world of dynamic change, sustained growth in the developing world may be of greater longer-run significance for US manufactured exports than growth among the major OECD countries. Viewed from the perspective of the geography and commodity structure of US exports, our foreign economic policy should not underestimate the importance of the developing world when we look to correct our trade deficit.

The emergence of developing countries as efficient producers and exporters of manufactured goods, as already discussed, adds a dynamic dimension to the competitive challenge confronting the United States and other industrial countries. Consequently, our trade performance in the future depends not only on worldwide patterns of economic growth, including the contribution to prosperity by the LDCs, but hinges as well on the sustained competitiveness of US industry. While US price competitiveness relative to other major OECD countries undoubtedly improved with the dollar's extraordinary depreciation since the latter 1960s, many LDCs still hold substantial cost advantages in producing standardized manufactures. Exchange rate changes alone cannot offset their advantage, particularly since many LDCs peg their exchange rates to the dollar, thereby evading this adjustment mechanism. Nevertheless, the dollar's sharp decline over the past year should measurably reinforce the improvement in the trade balance resulting from the more favorable world growth patterns expected in 1979. Once the benefits of a depreciated dollar have had their desired impact on our trade balance, however, we still must look to longer-term measures for protecting US competitiveness.

It is essential to check our excessive inflation rate. This can be accomplished with a mix of policies fostering greater competition and price flexibility in domestic mar-

kets, fewer executive decisions which push prices up, and prudent macroeconomic restraints. Perhaps even more important in the longer run are policies to promote technological innovation and modernization of our aging capital stock. Certainly new products and processes have in the past formed the bedrock of US comparative advantage in international trade. US technological leadership in the long run provides the most solid base for our export competitiveness in the future. Yet our efforts toward this objective should be bolstered, simply because the rapid dissemination of knowledge among both the industrial and developing countries makes it more difficult to maintain our position of technological leadership.

Given the important weight held by the advanced LDCs in US trade and payments, these countries should be encouraged to assume greater responsibilities in preserving the efficient operation of the international payments system and the adjustment process. As their trade surpluses rise and their dollar reserves accumulate, they should allow changes in dollar exchange rates to reflect their international competitiveness and growing economic vitality. Moreover, clear willingness on the part of the advanced LDCs to contribute to an efficient international adjustment process would help to discourage rising protectionist sentiment in this country and among other industrial countries against imports from the LDCs.

The resolution of US oil and energy problems is pivotal in correcting both the trade deficit and the imbalances in the domestic economy. Oil imports contributed roughly half of the trade deterioration since 1975. Moreover, OPEC's recent decision to hike oil prices during 1979 underscores the likely future uptrend in energy prices over the long term. A policy aimed at raising domestic oil and gas production while slowing domestic consumption would cut our oil import dependence, narrow the trade deficit, and relieve some pressure from the dollar in the exchange markets. Formulating and carrying out a domestic energy policy is fully within the legislative and executive powers of the US government, in contrast with the difficulties we encountered in efforts to promote a more balanced pattern of economic growth with our OECD partners. Oil, according to some economists, is not a key to our persistent trade deficit. Germany and Japan, they assert, depend almost entirely on imported oil and yet run persistent trade surpluses. This view neglects, however, that these economies have for decades adapted their structures of domestic production and foreign trade to sustain their energy imports. In allocating national resources, they have freed sufficient goods and services for export to pay for oil imports, while allowing domestic cost and price structures to pass through rapidly the increases in the real cost of imported oil. The United States, in contrast, has only recently confronted the realities of growing dependence on imported oil. This country still has to complete the reordering of domestic priorities in allocating our resources in the new environment. If we choose to grow more dependent on imported oil, then we must free more domestic resources for export and/or reduce nonoil imports, while adapting to the worsened terms of trade.

In the immediate concern to correct the trade disequilibrium, the US should not neglect our responsibilities as the world's banker and the dollar's position as the key reserve currency and vehicle for financing international trade and investment. As a result of the dollar's international role, a vast quantum of dollar liquidity has accumulated in the Eurocurrency markets. Should confidence in US stabilization policy wane, foreign owners may diversify their Eurodollar holdings. A cumulative pattern of such diversification could drag the dollar down, even if some progress is made in correcting the trade disequilibrium. Finally, it should be clear from the foregoing current account analysis that the United States need not run a trade surplus, so long as we continue to earn a large surplus on invisible transactions. We can achieve an overall current account surplus even with a trade deficit and meet our responsibilities as a provider of real resources to the rest of the world, as an international banker and lender, and as a provider of the key reserve currency. In this possible future environment, the international financial system may face the old problem of inadequate international reserves. To resolve that requires the cooperation of all countries in strengthening international institutions charged with expanding global liquidity consistent with growing world trade and investment. That is still another story.

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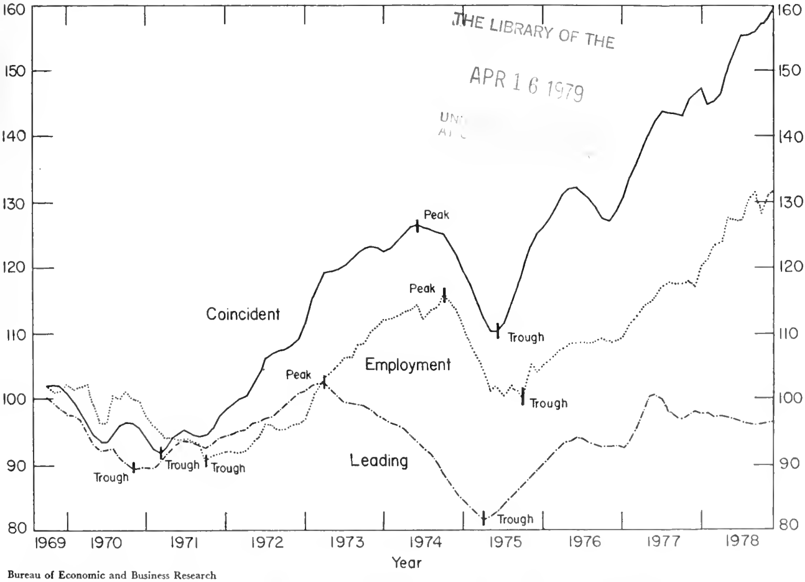
Illinois Leading Economic Indicator Shows Weakness

This month the Bureau of Economic and Business Research commences publication of an Illinois Index of Leading Indicators and an Illinois Index of Coincident Indicators. Hopefully, the leading indicator will provide an advance signal regarding the performance of the state economy. The regional indexes are similar to the corresponding US series published by the US Department of Commerce.

The leading indicator is developed from underlying statistical series that consistently change their direction of movement prior to a prolonged change in the main economic aggregates such as employment. Because it

Illinois Economic Indicators



Bureau of Economic and Business Research

Composite Index of Leading Indicators (August 1969 = 100)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1969									100.4	99.6	98.6	97.8
1970	97.6	97.0	95.4	93.1	92.4	92.5	92.7	91.2	90.0	89.4	89.6	89.6
1971	89.7	90.3	91.4	92.6	93.6	93.9	93.7	93.0	92.8	93.2	94.1	94.8
1972	95.0	95.3	95.7	96.3	96.6	97.2	97.7	98.8	99.7	100.7	101.2	101.7
1973	102.4	102.8	102.6	101.9	100.9	99.9	99.6	99.5	99.4	98.7	97.8	97.0
1974	96.7	96.2	95.7	94.6	93.9	92.9	92.0	90.8	88.7	87.1	85.6	84.5
1975	83.9	82.8	82.0	82.0	82.9	84.1	85.3	86.3	87.4	88.4	89.4	90.5
1976	91.6	92.7	93.5	93.8	94.1	94.0	93.8	93.2	93.0	93.0	93.1	92.3
1977	93.6	95.6	98.2	100.3	100.8	100.1	98.3	97.3	97.1	97.7	98.1	98.0
1978	98.0	97.6	97.6	97.3	97.3	96.9	96.6	96.3	96.4	96.7	96.7 p	96.6 p

Composite Index of Coincident Indicators (August 1969 = 100)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1969									102.1	102.2	102.0	101.1
1970	99.7	98.1	96.6	94.9	93.9	93.8	94.9	96.0	96.5	96.6	95.8	94.3
1971	92.5	91.9	92.8	94.3	95.2	95.2	94.8	94.5	94.8	96.0	97.6	99.0
1972	99.6	100.2	101.0	102.5	104.3	106.1	107.2	107.7	107.9	108.1	109.5	111.7
1973	115.2	117.7	119.4	119.7	119.8	120.4	121.2	122.4	123.1	123.5	123.1	122.7
1974	123.0	124.1	125.6	126.4	126.6	126.2	126.0	127.8	125.4	123.9	121.8	119.4
1975	117.3	114.8	112.3	110.5	110.5	111.9	114.3	117.4	120.7	123.5	125.3	126.3
1976	127.7	129.3	131.3	132.1	132.3	131.6	130.7	129.2	127.8	127.3	128.7	130.9
1977	133.7	135.7	138.0	140.2	142.4	143.9	143.8	143.7	143.5	145.6	146.6	147.3
1978	144.9	145.1	146.6	150.9	153.5	155.3	155.4	155.8	156.0	157.4	159.1 p	161.0 p

Source: Bureau of Economic and Business Research
p - Preliminary

moves in advance of the general economy, it may be used to forecast future events in the economy. Accordingly, it receives a large share of attention from economists, the press, and the general public. The coincident series tends to move simultaneously with the general economy.

The new Illinois series have been computed for the period from September 1969 to the present. Analysis of the data for the past 8 years shows that the series does a good job of signaling turns in the state economy. The leading indicator turned upward in January 1971 and in May 1975. These turns preceded the upturn in employment by 12 months and 7 months respectively. In both situations the coincident indicator also turned up before employment, thus helping to reinforce the signal.

The total lead time has been greater for downturns. The leading indicator turned down in March 1973. This was followed by the coincident indicator in November 1973, and employment in November 1974. Thus, the leading indicator preceded the changes in employment by 19 months.

Because of the limited number of series available and the need to revise our data, we feel that a turn is not fully signaled until the indicator has changed direction for 3 months and has moved at least 3½ percent. Using this informal rule, no false turns were forecast during the period under review, and all turns were correctly specified. If history repeats itself, upturns will be noted 4 to 6 months in advance and downturns will continue to have a prediction range of over one year.

Let us now turn to current values of the Illinois indicators. The leading indicator has trended downward since May 1977. The total decrease reached 3½ percent in April 1978 and it has continued since that time. At present the total drop from May 1977 is just over 4 percent. Although the indicator has not registered a massive decline, the downward drift has persisted over a sufficiently long time to signal a weakening in the entire state economy.

During most of this same period the Illinois Index of Coincident Indicators has continued to rise — from 142 in May 1977 to 161 at present.

The drop in the leading indicator is consistent with the view some commentators hold about the US economy. We anticipate at least a leveling off of economic activity in the State and believe a decline is the most likely prospect.

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Derivation of the Illinois Indexes

In setting up an index of leading indicators there are several factors to be considered. First, it is important for elements of the index to be plausible in terms of economic theory. Variables included in the leading indica-

tors may be causal in nature. For example, the US leading indicators series includes money balances (M_1) as one variable. Some economists believe this to be a variable which causes changes in business cycle conditions, so it is proper to include it in our analysis. Alternatively, a series may change as a result of an excluded major cause, but with a time lag shorter than that of the overall economy. The US index of 500 common stock prices is an example of such a series. This variable's theoretical basis lies not in its causation, but in the economic belief (supported by statistical evidence) that stock prices are determined by market forces that change prior to the business cycle.

Second, the selection of variables is limited to those that are available. This requirement, difficult for a national index, provides even greater problems for a state index. Some statistical series used in the US series cannot be applied to individual states. For example, money balances (M_1) already mentioned are clearly appropriate only for the entire country. Similarly, stock market price indexes are related to the economy of the country and not to any single state. Other series could apply to a state in a theoretical sense but are not available on a sufficiently timely basis. The index of net change in business inventories is one such variable; although it is used in the US Index of Leading Indicators it is unavailable for the state in time to be useful.

Finally, because any single series may have fluctuations which are spurious or unrelated to the business cycles, it is desirable to have a number of different types of series in this kind of index. In addition, cumulative changes in business activity may arise from a number of different sources; each source would need to be represented in an overall indicator.

Two indexes have been constructed for Illinois, the Illinois Index of Leading Indicators and the Illinois Index of Coincidental Indicators. Our constructions are based on the US indexes but altered, as will be indicated, to meet state data availability. Six variables, similar to those used in US indexes and available on a current basis in Illinois, are (1) average weekly hours; (2) housing units authorized; (3) layoff rate (Chicago); (4) real weekly earnings; (5) retail sales; and (6) total employment.

The following steps were taken in identifying variables to be included in the indexes. First, monthly percentage changes of variables were computed by dividing them by the long-run average of the changes. This standardization allows each series to have the same effect in the longer run and keeps highly volatile or stable series from having too great or too small an effect. The standardized changes were averaged into a single value to be accumulated into the monthly index. Because some underlying series fluctuate greatly, the final indexes were smoothed by an appropriate time-series operator.

As with the US series, we anticipate revising each of our series for two months after it is originally released. Revisions will fold in series not available at the time the index is first released and will correct for changes in previously available underlying data.

The Illinois Index of Leading Indicators is based on the first three variables already listed while the coincident indicator uses the second group of three. We hope in the future to introduce leading indicators for several specific cities in the state.

ROBERT W. RESEK AND CHUN-SANG CHEUNG

Illinois Business Indexes

Item	Nov. 1978	Oct. 1978	Nov. 1977
Employment-manufacturing[1] (in thousands)	1,254.9[a]	1,250.7	1,227.1
Weekly earnings-manufacturing[1]	$280.9[a]	$273.4	$264.0
Consumer price in Chicago[2] (1967=100)	198.1	195.4	179.4
Ordinary life insurance sales[3] (in millions)	1,307.3	$1,354.2	$1,221.8
Retail sales[4] (in millions)	$3,946[a]	$3,802	$3,574
Farm prices[5] (1967=100)	222.0	226.0	184.0
Coal production[6] (in thousands)	5,736.2	6,044.3	5,278.3
Petroleum production[7] (in thousands)	1,97[illegible]	2,035	2,115
Building permits[4] (in thousands)			
Residential housing units	[illegible]	6.8	6.1
Value of residential housing	$216,6[illegible]	$265,880	$216,09[illegible]
Value of nonresidential housing			
Industrial buildings	$[illegible],446	$39,866	$1[illegible]
Office, banks, and professional buildings	$29,396	$27,823	$10,316
Stores and other mercantile buildings	$1[illegible]	$24,805	$16,4[illegible]
Other	$15,9[illegible]	[illegible]3,451	$[illegible]
	1978-II	1978-I	1977-II
Personal income (in millions)	[illegible]3,[illegible]	$90,8[illegible]	$84,[illegible]

[1] Ill. Dept. of Labor. [2] US Bureau of Labor Statistics. [3] Life Ins. Agcy. Manag. Assn. [4] US Dept. of Commerce. [5] Ill. Crop Rpts. [6] Ill. Dept. of Mines. [7] Ill. Geol. Survey.
[a] Preliminary.

Comparative Economic Data for Selected Illinois Cities, November 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$ 103,472[a]	3,356.9[a]	$ 47,110[a]	5,448	5.8
Percentage change from	Oct. 1978	-35.3	-5.5	-7.4		
	Nov. 1977	n.a.	+7.4	+13.0		
NORTHERN ILLINOIS						
Chicago		$ 60,327	1,615.8	$ 35,470	3,283[b]	5.0[b]
Percentage change from	Oct. 1978	-43.0	-7.7	-10.7		
	Nov. 1977	+133.1	+6.5	+11.9		
Aurora		$ 4,652	138.4	$ 557		
Percentage change from	Oct. 1978	-24.7	-13.8	-10.8		
	Nov. 1977	+86.7	-1.2	+20.3		
Elgin		$ 4,367	107.2	$ 728		
Percentage change from	Oct. 1978	+78.3	-6.9	+10.6		
	Nov. 1977	+260.3	+37.8	+28.1		
Joliet		$ 1,855	395.1	$ 377		
Percentage change from	Oct. 1978	-74.7	+4.0	+9.5		
	Nov. 1977	+22.1	+17.1	+15.3		
Kankakee		$ 545	77.4[c]	$ 215		
Percentage change from	Oct. 1978	-63.5	+5.3	-16.3		
	Nov. 1977	+234.3	+14.3	0.0		
Rock Island-Moline		$ 3,466	114.3[d]	$ 1,334	176[b]	4.0[b]
Percentage change from	Oct. 1978	-53.4	-4.1	+6.2		
	Nov. 1977	-60.5	-3.3	+25.6		
Rockford		$ 2,723	151.9	$ 919	133[b]	4.7[b]
Percentage change from	Oct. 1978	-21.0	-6.6	+0.4		
	Nov. 1977	-6.6	+4.5	+9.2		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 3,594	43.1	$ 913	62[b]	3.4[b]
Percentage change from	Oct. 1978	-9.0	-5.0	-0.5		
	Nov. 1977	+2.5	+3.1	+10.9		
Champaign-Urbana		$ 2,172	46.3	$ 784	75[b]	4.2[b]
Percentage change from	Oct. 1978	+14.9	-8.3	+18.6		
	Nov. 1977	-10.4	-2.5	+9.0		
Danville		$ 1,233	42.3	$ 230		
Percentage change from	Oct. 1978	+43.3	-5.7	-1.2		
	Nov. 1977	+114.0	+4.4	-18.1		
Decatur		$ 5,090	121.4	$ 531	58[b]	5.7[b]
Percentage change from	Oct. 1978	+12.5	+0.9	+9.2		
	Nov. 1977	+17.2	+7.4	+30.4		
Galesburg		$ 3,428	29.6[c]	$ 174		
Percentage change from	Oct. 1978	+262.3	-3.5	+19.1		
	Nov. 1977	+14.3	+4.2	+8.7		
Peoria		$ 3,820	179.1	$ 1,584	171[b]	4.4[b]
Percentage change from	Oct. 1978	+22.5	-8.0	+18.2		
	Nov. 1977	+8.3	+3.8	+18.2		
Quincy		$ 327	37.7	$ 251		
Percentage change from	Oct. 1978	-26.5	-6.4	-0.7		
	Nov. 1977	-19.1	+2.7	+24.8		
Springfield		$ 2,921	101.6	$ 2,023	92[b]	5.5[b]
Percentage change from	Oct. 1978	-33.7	+3.9	+1.6		
	Nov. 1977	-43.6	-0.8	+29.4		
SOUTHERN ILLINOIS						
East St. Louis		$ 109	24.3	$ 176		
Percentage change from	Oct. 1978	+60.2	-11.6	-24.7		
	Nov. 1977	+10.1	-1.6	+15.7		
Alton		$ 451	77.8	$ 136		
Percentage change from	Oct. 1978	-86.6	-4.3	-3.5		
	Nov. 1977	+58.8	+27.1	+6.2		
Belleville		$ 1,784	21.1	$ 411		
Percentage change from	Oct. 1978	+2.4	+15.9	0.0		
	Nov. 1977	+384.7	+0.9	-5.0		
Carbondale-Murphysboro		$ 608	32.5	$ 297		
Percentage change from	Oct. 1978	+10.1	-3.8	-3.8		
	Nov. 1977	n.a.	+5.5	+19.7		

[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local post office reports; accounting period ending 1 December 1978. [4]Illinois Department of Labor, preliminary.

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory. [d]Includes East Moline.

Slow Growth in Employment in Illinois

RUTH A. BIRDZELL

Employment growth in Illinois continued to lag behind the national rate in 1976, as it generally had throughout the earlier 1970s. The only year in which Illinois did better than the national average was 1974. Even then, the state's performance was only slightly better. In other years, Illinois showed smaller increases (1973 and 1976), a larger decline (1975, the recession year), or a decline when the nation showed a gain (1972).

The US Department of Commerce Bureau of Economic Analysis has estimated total employment in Illinois at 5,119,198 in 1976, up 2.0 percent from the year before and 4.2 percent from 1971. For the United States as a whole, the BEA estimates indicate an advance of 2.6 percent from 1975 to 1976 and 8.9 percent from 1971 to 1976.

The same pattern of lags emerged in wage and salary employment and in private nonfarm employment. The only difference was that the gap between the US and Illinois was larger for wage and salary employment than it was for total employment, and was larger still for private nonfarm employment. Illinois rates of growth in these and other categories are compared with US rates in Table 1. Obviously the State did not keep up with the national averages from 1971 to 1976 (coming closest in services and government) and surpassed the national rates only in services from 1975 to 1976.

One result of the slower growth in Illinois has, of course, been a decline in Illinois employment as a share of total US employment — 5.4 percent in 1976 compared with 5.7 percent in 1971. Similarly, private nonfarm employment dropped from 6.1 percent to 5.8 percent. The drop showed up especially in manufacturing and trade employment. Service employment as a share of US service employment was off slightly; the government share was substantially the same in both years.

Expansion in the number of proprietors was much smaller both in the US and in Illinois between 1971 and 1976 than the growth in wage and salary employment. Such employment in Illinois increased slightly less than 1 percent, compared with a gain of 2.3 percent in the nation. The state lag reflected an increase in nonfarm proprietors that was only about two-thirds of the national rate. The change in the number of farm proprietors was about the same in Illinois as in the US as a whole — a 7 percent decline.

In 1976 Illinois matched the national growth rate in the number of nonfarm proprietors but lost relatively more farm proprietors.

Some compositional differences between the US and Illinois are indicated in Table 2. In the first major breakdown of employment — between proprietors and wage/salary workers — proprietors represented a smaller share in the State than they did in the nation. The nonfarm sector accounted for a larger portion of employment than it did nationally, with the private nonfarm sector noticeably larger. By the same token, the government categories of employment took a smaller share in Illinois than nationally, both at the federal level and at the combined state/local level.

Within the private nonfarm sector, the most notable difference was in manufacturing, which was substantially more important in Illinois than in the US as a whole, mainly on the strength of durable goods manufacturing. Services, on the other hand, were a somewhat smaller share of total employment in Illinois. These last two differences have to be counted as factors contributing to the

Table 1. Percentage Changes in Employment

	1971 to 1976		1975 to 1976	
	US	Ill.	US	Ill.
Total employment	8.9	4.2	2.6	2.0
Proprietors	2.3	0.9	0.1	-0.0
Wage and salary employment	9.6	4.5	2.9	2.2
Private nonfarm employment	10.0	3.6	3.6	2.5
Manufacturing	2.5	-3.2	4.0	1.3
Trade	14.8	6.9	4.2	3.4
Services	17.7	16.3	3.7	4.1
Government employment	8.3	7.7	0.1	0.1

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Data used for this article were compiled by the US Department of Commerce Bureau of Economic Analysis with the cooperation of the Illinois Bureau of Employment Security.

Table 2. Composition of Employment, Major Categories, 1971 and 1976, US and Illinois (Percentages)

	United States		Illinois	
	1971	1976	1971	1976
Total employment	100.0	100.0	100.0	100.0
Number of proprietors	9.9	9.3	8.4	8.1
Wage and salary employment	90.1	90.7	91.6	91.9
Nonfarm	88.7	89.3	91.1	91.2
Private	69.9	70.6	75.9	75.4
Manufacturing	21.4	20.1	25.9	24.1
Nondurables	9.2	8.4	9.1	8.3
Durables	12.2	11.7	16.8	15.8
Trans./utilities	5.1	4.8	5.8	5.3
Wholesale trade	4.4	4.8	5.5	5.8
Retail trade	13.5	14.0	14.0	14.1
Fin.-ins.-real estate	4.4	4.6	5.0	5.2
Services	15.8	17.1	15.0	16.7
Government	18.8	18.7	15.2	15.7
Federal	6.7	5.7	4.0	3.5
State and local	12.1	13.0	11.2	12.2

Illinois lag in growth as the national economy moves from one in which manufacturing takes first rank to one in which services are dominant.

Changes in Substate Areas, 1971 to 1976

Most Illinois workers live in metropolitan areas. Of the estimated total employment in Illinois in 1976, the counties which were part of standard metropolitan statistical areas accounted for 82.8 percent, 4,237,437 workers. Total employment in the six-county Chicago SMSA was 3,294,038 (64.3 percent of the State) and in Cook County alone was 2,657,554 (51.9 percent of the State). Of the 5 million-plus workers in Illinois in 1976, somewhat fewer than 882,000 worked in the 79 non-SMSA counties.

An examination of percentage changes between 1971 and 1976 shows clearly the importance of Cook County. In the State as a whole, employment rose by 4.2 percent over the five-year period, but in the State outside Cook County increased by 10.3 percent. The largest gain, 16.2 percent, occurred in the Chicago SMSA outside Cook County, with lesser gains posted elsewhere — 11.4 percent in all SMSA counties excluding Cook and 8.4 percent in the non-SMSA counties combined. Obviously, the 0.8 percent drop in Cook between 1971 and 1976 was the chief factor in holding back growth in the State.

In terms of job numbers, Cook County lost roughly 22,200 jobs over the five years while the rest of the Chicago SMSA was gaining 88,700, a net gain of 66,500 jobs for the six counties. The rest of the SMSA counties picked up 72,700 jobs and the non-SMSA counties 68,600 jobs. The total gain for the State was an estimated 207,850.

The same pattern prevailed for wage and salary employment — not surprisingly, given the weight of such employment in the total. Most of the percentage changes were somewhat larger than for the total because of the smaller base figures.

Considering nonfarm wage/salary employment, however, a divergence showed up between SMSA and non-SMSA counties. In the non-SMSA counties, private nonfarm employment showed a smaller percentage gain, with the difference made up by a larger relative advance in government employment.

In the three major categories of private nonfarm employment, a drop of 9.1 percent in manufacturing jobs in Cook County from 1971 to 1976 was the preeminent factor in the overall drop of 3.2 percent in the State. During the same period such employment was growing by 2.5 percent nationally. The Chicago SMSA outside Cook County rolled up a 12.6 percent gain; Illinois excluding Cook County and SMSA counties excluding Cook showed advances of 5 to 7 percent. Non-SMSA counties indicated a rise of 1.8 percent in manufacturing jobs.

In trade, also, Cook County was the dominant influence in holding state growth to about half the national rate. SMSA areas outside of Cook County showed good gains and the Illinois-less-Cook rate was 15.1 percent, slightly higher than the US rate.

Even in services, where the Illinois rate (16.3 percent) was considerably closer to the US rate (17.7 percent), Cook County was the laggard, with a rate of 12.1 percent. The growth rate for the Chicago SMSA minus Cook was three times the Cook County figure, and the rate for all SMSA counties except Cook was two times as high.

It appears that these figures have to be taken as confirmation that Cook County is not keeping up with the rest of the State, especially other SMSA counties, in generating jobs, and that jobs are actually filtering out of Cook County.

Growth from 1975 to 1976

With two exceptions, all the substate areas mentioned thus far showed employment gains in all the major components and categories from 1975 to 1976. The two exceptions occurred in government employment: an almost unnoticeable decrease in Illinois outside Cook County and a decline of four-tenths of 1 percent in non-SMSA counties. From the taxpayer's point of view, this hold-down might be welcomed; from the job market perspective, it is likely to be viewed with mixed feelings.

In total employment, Illinois minus Cook, the SMSA counties minus Cook, and the combined non-SMSA counties in Illinois roughly matched the 2.6 percent national rate of expansion. The Chicago SMSA minus Cook showed a gain of 4.5 percent. Cook, however, advanced only 1.4 percent in 1976, so the state rate was 2.0 percent. Approximately the same relationships prevailed for total wage/salary employment and private nonfarm jobs.

In the largest of the private nonfarm categories, manufacturing, the picture was different. None of the substate groupings used here matched the national rate of 4.0 percent. The Chicago SMSA minus Cook (3.7 percent) and the combined non-SMSA counties (3.6 percent) came closest. Cook County had 0.6 percent more manufacturing jobs in 1976 than in 1975.

In wholesale and retail trade combined, all the substate areas except Cook County surpassed the national average of 4.2 percent. The five suburban counties of the Chicago SMSA saw a 6.6 percent increase. The state increase was 3.4 percent; that in Cook County was 2.5 percent.

In the case of services, Illinois and all the substate groupings that exclude Cook County had growth rates in 1976 that exceeded the national average. Cook trailed behind with a 3.1 percent advance compared with 4.1 percent for the State and 3.7 for the US.

Employment by County

Only six counties in the State showed a decline in total employment from 1971 to 1976; the same number lost wage and salary employment. In private nonfarm employment, 22 counties showed lower levels of employment in the later year, a reflection in major part of a loss of manufacturing jobs.

At the other end of the scale, gains of 20 percent or more were shown by 7 counties for total employment and by 18 to 25 counties for wage and salary employment, private nonfarm employment, and manufacturing em-

Table 3. Distribution of Percentage Changes in Employment at the County Level

Percent change	Total employment	Wage/ salary employment	Private nonfarm employment	Manufacturing[a]	Services[b]	Government
			Number of counties: 1971-76			
Decline	6	6	22	40	11	2
Increase						
0 - 4	20	10	17	8	9	6
5 - 9	32	27	21	13	5	9
10 - 14	27	25	8	11	15	10
15 - 19	10	13	16	4	12	24
20 or more	7	21	18	25	40	51
			Number of counties: 1975-76			
Decline	10	10	12	25	13	29
Increase						
0 - 4	76	61	46	29	44	73[c]
5 - 9	14	27	32	19	18	0
10 - 14	2	3	8	12	13	0
15 - 19	0	1	3	8	5	0
20 or more	0	0	1	8	0	0

[a] No manufacturing in one county.
[b] No report for 10 counties 1971-76, 9 counties 1975-76.
[c] No change in 65 counties.

ployment. Half the counties of the State showed increases of 20 percent or more in government employment.

Most of the increased government employment occurred at the state and local levels. Three-fourths of the counties showed advances of 20 percent or more in such jobs over the five years. In contrast, federal civilian employment was reduced in 61 counties and federal military employment fell in all counties but one.

There are two especially notable aspects of the employment changes from 1975 to 1976. First, 10 Illinois counties failed to share in the general recovery from the 1974–75 recession and continued to lose jobs. A total of 25 counties lost manufacturing jobs. Second, the large increases in government employment which showed up in the 1971–76 comparisons obviously occurred prior to 1976. From 1975 to 1976, 29 counties saw cuts in this category, and there was no change in 65 others. Four counties had 1 percent increases and four had 2 percent rises in government employment. Table 3 offers additional details of the five-year changes in employment at the county level.

Despite the clamp-down on government employment in 1976, that type of employment accounted for the largest share of wage and salary employment in 46 counties in 1976 and was the second-ranking source of such jobs in another 28. In one county, government and trade tied for first rank. Most of the counties in which government ranked first were in the western and southern portions of Illinois, and most of the counties where is ranked second were in the northwestern quarter.

Manufacturing ranked first as an employer in 38 counties, mostly in counties in the northern half of Illinois. This group included 10 SMSA counties. Trade came in a poor third as the first-rank source of employment — 12 counties, including 6 SMSA counties, had trade as the largest employer in 1976. However, trade ranked second in 45 counties.

Table 4 shows how the major categories of wage and salary employment rank as sources of employment in Illinois counties. For example, in those 46 counties where

Table 4. Rank of Employment Sources (Number of counties)

First	Second	Third	Fourth
Government (46)	Trade (24) Mfg. (13) Services (5) Farm (2) Mining (1) Constr. (1)	Trade (20) Services (15) Mfg. (7) Farm (3) Mining (1)	Services (21) Mfg. (14) Farm (7) Trade (2) Mining (1) (None) (1)
Manufacturing (38)	Trade (20) Govt. (17) Mining (1)	Trade (15) Govt. (13) Services (9) Mining (1)	Services (21) Govt. (8) Trade (3) TPU[a] (2) Farm (1) Constr. (1) (None) (2)
Trade (12)	Govt. (8) Mfg. (2) Services (2)	Services (6) Mfg. (4) Govt. (2)	Mfg. (5) Services (3) Govt. (2) Mining (1) F-I-RE[b] (1)
Services (2)	Trade (1) Govt. (1)	Trade (1) Govt. (1)	Mfg. (2)
Mining (2)	Govt. (2)	Trade (1) Services (1)	Mfg. (1) TPU (1)
Construction (1)	Mfg. (1)	Govt. (1)	Trade (1)
Government-Trade (tie)	(1)	Mfg. (1)	TPU (1)

[a] Transportation and public utilities.
[b] Finance, insurance, and real estate.

government ranked first in 1976, trade ranked second in 24, third in 20, and fourth in 2.

In Brief . . .

These many details add up to the fact that employment is growing at a lower rate in Illinois than it is in the US as a whole, partly because Illinois employment is concentrated in a slow-growing manufacturing sector. The difficulty is not assignable as between durables manufacturing and nondurables manufacturing. Both showed drops in Illinois from 1971 to 1976 while the nation was advancing in durables and suffering a relatively minor decline in nondurables. In the 1976 recovery Illinois rates were much less than national rates — 1 percent compared with nearly 4 percent in durables and 2 percent compared with more than 4 percent in nondurables.

Illinois also lagged badly in the growth of trade employment, the second-largest component. While trade employment expanded by nearly 15 percent in the early 1970s in the US, it gained less than 7 percent in Illinois. State growth fell behind, too, in the finance-insurance-real estate group, and was negative in transportation-utilities (US, +2.1 percent). These two categories are not large in Illinois, but nevertheless account for a large enough group of workers to warrant attention.

Cook County receives such frequent mention mostly because it carries at least as much weight as the rest of the State combined. A lag there can counterbalance growth everywhere else. However, observing that manufacturing employment dropped 9 percent in Cook in the early 1970s should not be allowed to obscure the fact that 39 other counties also lost jobs in that category. Tables 3 and 4 are an attempt to show a fuller picture of employment in all the counties of the State.

A table will appear in the April issue of the *Illinois Business Review* which will show county-by-county details of employment in 1976.

Employment Data Available

Detailed BEA employment data are available for each of the 102 counties of Illinois for 1971 through 1976 for the breakdown shown in Table 2 on page 5. Those interested in obtaining additional data may write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801. A charge will be made to cover costs.

The Great China Trade Fever

GEORGE T. YU

The 1979 visit of Deputy Prime Minister Deng Xiaoping of the People's Republic of China to the United States ushered in a new era in Sino-American relations. The visit represented the culmination of developing interaction between the two countries since former President Nixon went to China in 1972. More important, Deng's visit symbolized the end of three decades of Sino-American conflictual interaction. A new relationship based upon cooperation was now anticipated.

For the United States, normalization held a number of promises, strategic, economic, and political. The new relationship was expected to enhance the prospects for stability and peace in Asia, it would contribute to greater regional and global economic interaction and growth, and it would result in a stable system of independent nations in Asia. These objectives were directly linked to our national interests.

An interest of more immediate concern and importance was the expected economic benefits to be gained from the new Sino-American relationship. Speaking before a group of American business leaders, Secretary of State Cyrus R. Vance put it thus: "It is particularly useful . . . to note some of the economic benefits we expect to flow from the establishment of diplomatic relations with [China]. These include our participation as a regular supplier of agricultural commodities to China, the ability of US exporters to compete on an equal basis with other suppliers, and the resumption of shipping, air, banking, and other normal economic relations with China." Clearly, there would be opportunities for American business. A new China market awaited US products.

Americans have long been lured by the promise of a China market. In earlier times, there was the expectation of supplying oil for the millions of lamps of China; later, it was the anticipation of selling cloth to clothe the 400-million-plus Chinese. A contemporary version of a China market open and awaiting American products was expressed by an agricultural leader who said that chicken consumption in China could be raised to American levels by selling "every bushel of corn and soybeans we produce" to the 900-million-plus Chinese. No doubt a market existed and exists for American products; that US exports to China reached a high of $146 million in 1920 and $824 million in 1978 is testimony to the existence of a China market.

Table 1. China: Major Economic Indicators, 1977

GNP (in billions of dollars)	373
Population (millions)	983
Population increases (percent)	2.26
GNP per capita (dollars)	379
Agricultural production (1957=100)	149
Grain output (millions of metric tons)	285
Grain output per capita (kilograms)	290
Industrial production (1957=100)	572
Steel output (millions of metric tons)	26

Source: Adapted by the author from Arthur G. Ashbrook, Jr., "China: Shift of Economic Gears in Mid-1970's," in US Congress, Joint Economic Committee, *Chinese Economy Post-Mao*, Vol. 1, (Washington, D.C., 9 November 1978), p. 208.

The question was, therefore, not whether a market existed for American products; it did. Rather, the issues were what was the political and economic context of the China market and what American products were required; also to be considered were the role of foreign competitors, products China could export to America, China's ability to pay for imports, and other questions. Let us turn to an examination of these and other issues.

A quick survey of China's economy will suffice to present a picture of the state of underdevelopment. Table 1 provides a sample of China's major economic indicators. It should be pointed out that considerable progress has been achieved since the founding of the People's Republic of China in 1949. For example, China's per capita GNP stood at $379 in 1977 compared with less than $50 in 1949. During the 1950s, before the Sino-Soviet conflict, massive material and technical assistance pro-

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vided by the USSR and East European countries helped build a Chinese machine-building industry; other sectors of the economy also received Soviet and East European aid. However, advances were checked by various events. In addition to the termination of Soviet bloc assistance, the economy was also affected by waves of political turmoil, including the Cultural Revolution of the 1960s and the "Gang of Four" of the 1970s. In the latter instance, Chairman Hua has asserted that, between 1974 and 1976, because of the influence of the "Gang of Four," China lost $53 billion in industrial output, $21 billion in revenue, and 28 million tons of steel production. Whatever the contributing factors, political, economic, foreign, and otherwise, and notwithstanding the advances to date, China's economy remains at a low level of development. As China's leadership has declared, there is a clear need for the rapid development of the economy.

It is well known that under the Hua Guofeng/Deng Xiaoping leadership China has embarked upon an ambitious economic modernization drive. The 10-year plan (1975–85), as presented by Chairman Hua in 1978, the real date of the beginning of the drive, calls for producing 400 billion kilograms of grain by 1985; the value of agricultural output is to increase by 4 to 5 percent in each of the eight years from 1978 to 1985. Modernization of the agricultural sector is to "achieve 85 percent mechanization in all major processes of farmwork," with the goal of laying "a solid foundation for agriculture." In the industrial sector, "construction of an advanced heavy industry is envisaged." This includes the construction of 120 new industrial projects: 10 steel works (producing 60 million tons of steel by 1985), 9 nonferrous metal complexes, 8 coal mines, 10 oil and natural gas fields, 30 power stations, and others. Six new trunk railways and 5 key ports are also to be built. With respect to light industrial development, textile, sugar, paper, and other products are to be greatly expanded, as well as "production of articles of daily use." Petrochemical products such as chemical fibers and plastics will take up a larger proportion of the raw materials supplied to light industry. In all, during each of the eight years from 1978 to 1985 industrial output is to increase by over 10 percent. The completion of the 1978–85 plan will be followed by three five-year plans, which by the year 2000 will allow "China to take its place in the front ranks of the world economy."

Table 2. China: Imports by Leading Countries, 1976 (in millions of $)

Country	Amount
Australia	278
Canada	219
France	402
Italy	143
Japan	1,746
Netherlands	46
Switzerland	60
United Kingdom	141
United States	149
USSR	238
West Germany	716
Total	4,138

Source: Adapted by the author from Richard E. Batsavage and John L. Davie, "China's International Trade and Finance," in *Chinese Economy Post-Mao*, p. 735.

Table 3. Composition of Chinese Imports By End Use, 1974-76

Categories	Percentage
Capital goods	27
Machinery - 16%	
Transport Equipment - 11%	
Foodstuffs	15
Grain - 10%	
Sugar - 3%	
Others - 2%	
Consumer durables	1
Industrial supplies	57
Metals - 29%	
Textile fibers, yarn, and fabrics - 8%	
Fertilizers - 4%	
Others - 16%	

Source: Batsavate and Davie, op. cit., p. 717.

Clearly, these are ambitious targets. Given China's weak industrial base, especially in the capital equipment sector, much of the success of the modernization drive will depend upon cooperation with foreign suppliers, or expanding imports from abroad.

The dependency upon external suppliers for China's economic development represents a major departure from the policy of "self-reliance," enunciated by the now purged "Gang of Four." That policy stressed reduced reliance on foreign assistance and limited foreign presence; it is now blamed, among other reasons, for China's current economic problems as already noted. A question of vital importance is, have the policies of the "Gang of Four" been eliminated by their arrest? This in turn raises the larger question of the present and future political stability of the current Hua-Deng leadership.

In any discussion of contemporary Chinese politics, modesty should be very much in order. This has been especially true relating to our capacity to understand and predict China's political process. It is only necessary to cite the Cultural Revolution or the reemergence, subsequent fall, and re-reemergence of Deng Xiaoping. I am not saying political instability and policy changes in the near future should be expected; on the other hand, we must take full cognizance of China's political developments and be alert to future changes.

Whatever the political uncertainties, we do know that there is a present Chinese commitment to economic mod-

ernization, to the need for foreign suppliers, and that imports from abroad will play a major role in China's production drive. It has been estimated that Chinese purchases from external suppliers to support economic modernization by 1985 could reach $20 billion. This would represent a major increase measured in terms of China's 1976 import bill of $6 billion. The new great China trade rush has just begun!

Granted the role of foreign suppliers in China's economic modernization, what will determine the choice of trading partners and what will be the nature and level of US participation in the China trade? The primary objective of China's production drive is to increase yields in major agricultural crops and to expand output for major industrial products, as already noted. Thus a determining factor in the selection of foreign suppliers will be their ability to fill these needs; in the case of agriculture, this will include, and has included, the capacity to provide grain, at least until China's own production can be increased. Table 2 provides a list of major imports in 1976 by China in terms of country of origin and amount. Several facts should be noted. First, China's imports from Australia and Canada included large shipments of grain, for example, wheat, $124 million and $145 million for the year from the two suppliers respectively. Second, the 11 foreign suppliers were all industrial states and provided China with industrial products. Third, while the reliance upon one supplier, Japan, was especially great, China did appear to seek to distribute its imports to various sources. Finally, the total import bill from the 11 foreign suppliers came to $4.138 billion, or almost 70 percent of China's total import bill of $6 billion. It should be clear that China's imports are closely linked to domestic needs. The pattern is likely to continue, providing support for China's economic modernization.

We must also look briefly at the specific distribution of China's imports. For 1974–76, the composition of imports by end use was reported as shown in Table 3. With Chairman Hua's 1978 reaffirmation of China's production drive, trade expansion in the various categories cited can be expected. This will especially include purchases of foreign plants and equipment and industrial supplies. In the latter instances, imports are expected to increase immediately as planned growth in industrial output creates demands for steel, nonferrous metals, rubber, chemicals, and other supplies. Purchases of capital goods will also increase, including acquisition of complete plants and other foreign technology. However, given the lagged effect on trade of technology purchases, this sector is not expected to show increases in China's imports until later. As for agriculture, imports will vary with the performance of Chinese agriculture, but are expected to continue. In sum, imports have been, and will continue to be, tailored to China's specific economic requisites; China's needs also make clear that the industrial countries will play a major role as suppliers.

America's present and future participation in China's economic modernization was well demonstrated during Deputy Prime Minister Deng's visit. Deng and members of the Chinese delegation toured the Ford plant in Marietta, Georgia (Ford has sold China 700 trucks worth $3.5 million), the Hughes Tool plant in Houston, Texas (Hughes Tool has sold China $10 million of oil drilling tools), and the Boeing Aircraft Company in Seattle, Washington (Boeing had just signed a $156 million contract to sell China three Boeing 747s). In addition to the Chinese purchases mentioned, others reported include a $1 billion iron ore mines and processing facilities from U.S. Steel, a $100 million contract with Bethlehem Steel to develop Chinese iron ore mines, a $5 million agreement with Kaiser Engineers for mining development, an $800 million contract with Fluor for copper mine development, and a $1 million agreement with John Deere for tractors. There can be no doubt of America's role as a supplier to China. America has caught the "China fever"!

Indeed, America enjoyed a special advantage as a supplier for China's economic modernization. This was especially true of, but not limited to, the area of high-technology products. A quick glance at the leading 25 imports from the United States to China for the 1976–77 period (see Table 4) provides support for this claim. The table also reveals our role as a supplier of agricultural products, soybeans, and cotton. (Wheat, while not included in Table 4, has also been imported.) It should be pointed out that 1976–77 was an "off" period in Sino-American trade relations, following the peak in 1973 and 1974 which followed the opening of interaction in 1972. Notwithstanding, Table 4 and the purchases mentioned earlier provide a good indicator of the range and types of American products required by China. The 1979 normalization of relations with China should further pro-

Table 4. Leading Imports from the United States to China, 1976-77

1. Special purpose vehicles
2. Soybean oil
3. Synthetic fibers
4. Raw cotton
5. Soybeans
6. Nitrogenous fertilizer
7. Internal combustion engines
8. Aluminum
9. Organic chemicals
10. Fats, tallow
11. Machine tools
12. Kraft paper and paperboard
13. Parts for instruments and apparatus
14. Other inorganic chemicals
15. Other chemical products and preparations
16. Taps, cocks, valves
17. Statistical machines
18. Other electrical measuring and controlling instruments
19. Excavating, leveling, boring machinery
20. Sulphite wood pulp
21. Plastic materials
22. Pumps for gases, etc.
23. Tools for hand or machine use
24. Parts for motor vehicles
25. Lifting and loading machinery

Source: Adapted by the author from Martha Avery and William Clarke, "The Sino-American Commercial Relationship," in *Chinese Economy Post-Mao*, p. 753.

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mote interest in American industrial and agricultural products.

Accepting the role of the US as a supplier to China's economic modernization, we must also examine the question of future development of the relationship. Several considerations should be noted. First, being a late entry to the "China fever," the United States faces very strong competition. There are two levels to this consideration. On the one hand, because of political and other uncertainties in the relationship until the 1970s, American suppliers could not always gain access to the Chinese market and were unfamiliar with Chinese business practices and needs. The American delegation/technical seminar groups going to China have done much to introduce American products as well as to allow familiarization with China by American suppliers, but much remains to be done if a greater range and level of American products are to be introduced. On the other hand, present and future American suppliers face a host of foreign competitors for a share of the China market. For example, Japan is likely to remain one of the strongest competitors. However, it is unlikely that any one country will be allowed to monopolize China's imports; a balance will be sought, with China purchasing required products from the best suppliers.

Second, there is the question of how China will pay for the purchases. It is thought that China's $5 billion in hard currency reserves will be sufficient for developmental spending for only 1979. The issue becomes, where will China secure the funds? One source will be the development of tourism, already a growing industry. China's agreements with Intercontinental Hotels and Hyatt to build fifteen 1,000-room hotels (and with Coca-Cola to provide drinks for the tourist) can be seen as a way to earn hard currency. Another source is expected to be China's developing oil industry. Estimates of Chinese crude oil reserves ranged from a low of 3 billion metric tons (bmt) to a high of 10 bmt. During the 1974–76 period, crude oil exports constituted 9 percent of China's total exports ($21,090 million); the percentage was expected to grow as China's oil industry, with American oil-drilling equipment, expanded (production was estimated to have reached 1.8 million barrels a day in 1976), earning for China additional funds to finance the required purchases. The question, of course, was whether China's oil industry can maintain the growth rates of 20 to 25 percent expected over the next 7 years (1979 to 1985). Indeed, the question of China's ability to pay for imports, and hence the program of economic modernization, is directly linked to domestic production. Even with greater production in all sectors of the economy, most students of the Chinese economy do not believe that exports will provide the magnitude of foreign earnings required for China's economic plans. China may require sizable borrowing abroad to achieve the goals of the 10-year plan. In this instance, there may yet be a role for American banks in China's economic development.

Finally, trade constitutes a two-way street; Americans cannot expect a growth in exports to China without a concurrent growth of Chinese imports. Given the crucial relationship between imports and exports for China, the United States must be prepared to greatly ease the importation of Chinese products, such as by the extension of most-favored-nation (MFN) tariff treatment. This is a difficult problem, with the potential of affecting American industries and imports from other countries. But the problem is not without solution; we are already importing Chinese crude oil, textile, and other products. (Chinese imports were $324 million in 1978.) China's import of American products will not depend totally upon our importation of Chinese commodities; for certain products such as offshore oil-drilling equipment, America is the leading world supplier. However, a solid and healthy trade relationship requires a willingness on the part of the United States to also buy Chinese products.

The great China trade fever is upon us. An appreciation of the political and economic situational-environmental context will help to ensure a role for the United States in the new China market.

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The Economy Weakens

The economy has weakened since the end of last year. Although economic activity continues to expand, the rate of growth has slowed. Evidence of lagging business activity is provided by statistics relating to production, employment, income, and sales. Interest rates have also leveled off. Notwithstanding the moderation in the economy, the rate of inflation has accelerated.

At the outset, however, it should be pointed out that these interpretive remarks about the economy may be premature. Not enough time has passed to be confident that an economic retrenchment is firmly in motion. Also, it turns out that the early part of the past three years has shown economic weakness. Hence we must be at least mildly skeptical of our ability to distinguish between changed seasonal patterns, on the one hand, and cyclical shifts, on the other.

Slower Output Growth

Output growth has slowed since the end of last year. Industrial production, which rose nearly 8 percent in the year ending in December 1978, has since expanded at only a 2 percent annual rate (see chart). Output growth also slowed markedly in the early part of 1978 and 1977. These declines were chiefly caused by inordinately severe weather. Even though the data are adjusted for ordinary seasonal influences, the adjustments can be overwhelmed by unusual seasonal shifts.

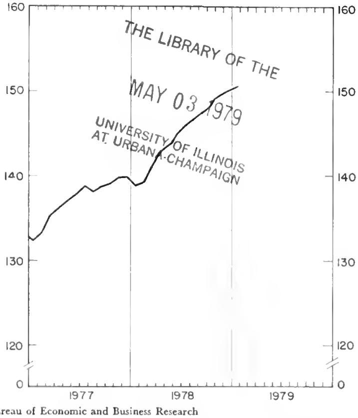
Weakness early this year has centered in the production of automobiles, steel, and coal. Declines in those areas offset gains in production of construction supplies and consumer goods, and the generation of electric power. In light of inflationary expectations it is reasonable to presume that there has been an increase in desired inventory levels. Surprisingly, however, output of goods held in inventories has not expanded sharply.

Reduced Employment Growth

Employment growth appears to have slowed this year, but the statistics present an ambiguous picture. Payroll employment has risen at only a 3.9 percent rate since December, down sharply from a 5.1 percent rate of increase from September to December 1978. Payroll statistics are derived from records of employers; they represent a count of jobs — including people with two or more jobs. Total employment statistics, which continue to show a rapid growth, are accumulated from surveys of households; they represent a count of employed people — regardless of the number of jobs an individual might have. Changes in payroll employment may be more closely related to changes in the economy than are changes in total employment.

The unemployment rate has drifted downward since the end of last year, reaching 5.7 percent of the labor force in mid-February. Based on data from household surveys, the number of people unemployed has declined 131,000 since December 1978. Over this same period,

Industrial Production



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employment rose by 745,000. Thus, for every person drawn from the ranks of the unemployed it was necessary to create nearly 6 jobs. The remaining jobs were filled by those entering, or reentering, the labor force.

Moderate Spending Increases

Both consumer and business spending have moderated this year. Consumer spending has slowed markedly. Retail sales, which rose a whopping 17 percent in 1978, have since inched upward at about a 5 percent annual rate. Moreover, these statistics are market values — including the effects of inflation; hence, the physical volume of sales has probably declined. Automobile sales have registered weakness, especially in domestically produced autos. The composition of sales appears to be shifting increasingly toward small cars.

Business spending this year is expected to rise somewhat less than in 1978. According to a Commerce Department survey of capital expenditure intentions, businesses plan to increase this investment spending by 11.3 percent; last year capital expenditures rose 13.3 percent. After adjusting for inflation, investment spending is expected to rise 3 percent this year; in 1978, such spending rose about 5 percent.

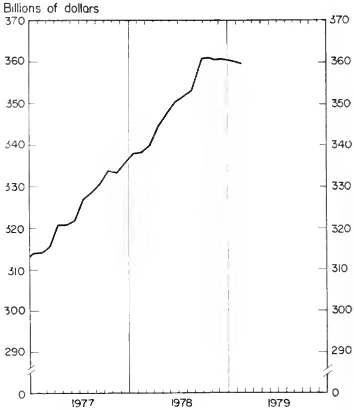
A weakening in capital spending adversely affects the economy. In the short run, a moderation in investment spending serves to dampen spending in other sectors of the economy. In the longer run, weakness in capital expenditures tends to lead toward slower productivity growth. The US economy would benefit from more rapid increases in productivity — output per man-hour. Productivity growth makes it possible for wage increases to occur without corresponding increases in prices of output. Thus, improved productivity growth is an important element in our ability to reduce inflationary pressures over the next decade.

Accelerating Inflation

The rate of inflation has accelerated again. Consumer prices have risen at more than a 12 percent annual rate since year-end. Last year they rose just over 9 percent. Producer prices have exploded at nearly a 15 percent rate since the end of last year. Food prices have risen at more than a 20 percent rate during the period.

It is likely that these recent price increases at the producer level will lead to even more rapid inflation in coming months. In addition, recent increases in social security taxes will be pushed forward to consumers. Beyond these considerations, higher oil prices will filter through to a wide range of products and services.

Money Supply



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Stabilized Interest Rates

Interest rates have registered marked stability so far this year. After rising sharply from late summer to November–December, their general level has remained unchanged on balance. The prime rate, the rate of interest charged by banks to corporate customers with unquestioned credit standing, has remained at 11.75 percent since late December. During this same period, the cost of funds for adjusting bank reserve positions — that is, interest rates paid by banks for federal funds and for large-denomination (over $100,000) certificates of deposit — has drifted downward.

Interest rates are likely to decline somewhat from recent levels. The general weakening in the economy has led to reductions in credit demands. For example, business loans at large banks have been approximately unchanged since early November. Even so, interest rate declines are likely to be modest. With an inflation rate in the 8–10 percent range, there is little margin for a backoff in interest rates. The real rate of interest — the rate of interest adjusted for expected inflation — is unlikely to turn negative for a protracted period of time.

Slower Monetary Expansion

The pace of monetary expansion has slowed since late last fall. The money supply (M_1), which expanded at

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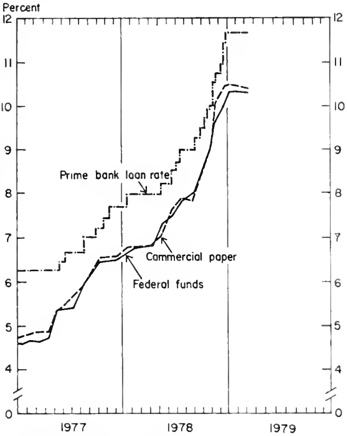
Interest Rates



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more than a 10 percent annual rate from March to September 1978, has since remained unchanged (see chart). The money supply plus time deposits (M_2) rose at nearly an 11 percent rate from March to September, but has since risen at only a 3.3 percent rate. Statistics are unavailable on the growth in NOW (negotiable orders of withdrawal) accounts at savings and on loan associations and share drafts at credit unions.

The slower growth in money does not represent a tightening in monetary policy. Instead, it reflects the weakening in credit demands and the absence of upward pressure on interest rates. Even so, if the reduced rates of monetary expansion persist over an extended period of time, they will, at length, contribute to a further weakening in the economy. WILLIAM R. BRYAN

Illinois Business Indexes

Item	Dec. 1978	Nov. 1978	Dec. 1977
Leading indicator (1969=100)[a]	98.8[b]	97.8[b]	[illegible]
Coincident indicator (1969=100)[a]	153.8[b]	157.1[b]	[illegible]
Employment-manufacturing (in thousands)[1]	1,242.4	1,256.6	1,240.[illegible]
Weekly earnings-manufacturing[1]	$285.3	$280.9	$270.[illegible]
Consumer prices in Chicago (1967=100)[2]	198.6	198.1	180.0
Ordinary life insurance sales (in millions)[3]	$1,606.7	$1,307.3	$1,4[illegible]
Retail sales (in millions)[4]	$4,345	$3,946	$4,14[illegible]
Farm prices (1967=100)[5]	230	222	192
Coal production (in thousands)[6]	4,880.6	5,736.2	787.2
Petroleum production (in thousands)[7]	2,038	1,970	2,0[illegible]
Building permits (in thousands)[4]			
Residential housing units	2.8	5.5	[illegible]
Value of residential housing	$104,517	$216,624	$114,2[illegible]
Value of nonresidential housing			
Industrial buildings	$25,398	$24,446	$25,3[illegible]
Office, banks, and professional buildings	$11,750	$29,386	$1[illegible]
Stores and other mercantile buildings	$17,541	$15,022	$15,01[illegible]
Other	$36,395	$18,906	$15,0[illegible]
	1978:II	1978:I	1977:II
Personal income (in millions)[4]	$93,690	$90,830	$84,5[illegible]

[1]Ill. Dept. of Labor. [2]US Bureau of Labor Statistics. [3]Life Ins. Agcy. Manag. Assn. [4]US Dept. of Commerce. [5]Ill. Crop Rpts. [6]Ill. Dept. of Mines. [7]Ill. Geol. Survey.

[a]Data for Jan. 1979 compared with Dec. 1978 and Jan. 1978. [b]Preliminary.

Comparative Economic Data for Selected Illinois Cities, December 1978

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$ 109,691[a]	3,549.3[a]	$50,703[a]	5,072.1	5.7
Percentage change from	Nov. 1978	+6.0	+5.7	+7.6		
	Dec. 1977	n.a.	+4.4	+3.2		
NORTHERN ILLINOIS						
Chicago		$ 80,527	1,703.4	$38,055	1,516.9	6.6
Percentage change from	Nov. 1978	+33.5	+5.4	+7.3		
	Dec. 1977	-3.5	[illegible]	+0.4		
Aurora		$ 2,079	155.7	$ 652	38.1	5.0
Percentage change from	Nov. 1978	-55.3	+12.5	+17.1		
	Dec. 1977	-8.6	+3.4	+22.5		
Elgin		$ 1,847	91.3	$ 765	27.8	5.8
Percentage change from	Nov. 1978	-57.7	-14.8	+5.0		
	Dec. 1977	-47.2	+6.0	+18.6		
Joliet		$ 557	402.4	$ 472	46.6	5.6
Percentage change from	Nov. 1978	-69.9	+1.8	+25.2		
	Dec. 1977	-69.6	+27.8	+11.8		
Kankakee		$ 2,216	79.3[b]	$ 263	13.4	8.5
Percentage change from	Nov. 1978	+306.[illegible]	+2.4	+22.3		
	Dec. 1977	+553.6	+4.0	+8.2		
Rock Island-Moline		$ 1,008	137.2[c]	$ 1,281	46.3	5.0
Percentage change from	Nov. 1978	-70.9	+20.0	-3.9		
	Dec. 1977	-51.1	+12.5	+8.5		
Rockford		$ 2,048	164.2	$ 1,217	71.2	5.5
Percentage change from	Nov. 1978	-24.7	+8.0	+32.4		
	Dec. 1977	-51.7	[illegible]	+14.[illegible]		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 2,280	44.2	$ 996	38.4	4.4
Percentage change from	Nov. 1978	-36.5	+2.5	+9.0		
	Dec. 1977	-29.4	-2.2	+22.2		
Champaign-Urbana		$ 558	49.3	$ 762	46.2	4.7
Percentage change from	Nov. 1978	-84.4	+14.3	+2.8		
	Dec. 1977	+43.8	+1.4	+11.0		
Danville		$ 240	46.7	$ 277	18.8	7.9
Percentage change from	Nov. 1978	-80.5	+10.4	+20.4		
	Dec. 1977	-57.4	+13.9	-18.5		
Decatur		$ 3,793	119.8	$ 656	42.3	6.4
Percentage change from	Nov. 1978	-25.4	-1.3	+23.5		
	Dec. 1977	+84.3	+5.3	+25.1		
Galesburg		$ 499	30.8[b]	$ 207	16.2	11.1
Percentage change from	Nov. 1978	-85.4	+4.0	+18.9		
	Dec. 1977	+217.8	+4.[illegible]	+4.0		
Peoria		$ 1,571	197.6	$ 1,438	61.4	5.8
Percentage change from	Nov. 1978	-58.8	+10.3	-9.2		
	Dec. 1977	-77.4	+7.2	+12.[illegible]		
Quincy		$ 251	45.1	$ 143	20.6	6.5
Percentage change from	Nov. 1978	-23.2	+19.[illegible]	-43.0		
	Dec. 1977	-20.[illegible]	+4.3	-50.1		
Springfield		$ 708	120.5	$ 2,297	49.8	6.6
Percentage change from	Nov. 1978	-75.7	+18.6	+13.5		
	Dec. 1977	-88.9	-2.2	+25.8		
SOUTHERN ILLINOIS						
East St. Louis		$ 531	[illegible]	$ 247	22.5	10.3
Percentage change from	Nov. 1978	+387.[illegible]	+5.7	+40.3		
	Dec. 1977	+1,[illegible]	-4.4	+22.3		
Alton		$ 2,289	78.8	$ 197	15.2	6.5
Percentage change from	Nov. 1978	+407.5	+[illegible]	+44.8		
	Dec. 1977	+[illegible]	+17.9	+21.6		
Belleville		$ 644	23.7	$ 459	19.6	4.3
Percentage change from	Nov. 1978	-63.9	+[illegible]	+11.6		
	Dec. 1977	+52.9	-3.2	-8.0		
Carbondale-Murphysboro		$ 6,045	33.6	$ 319	26.7	8.1
Percentage change from	Nov. 1978	+834.2	+3.4	+7.4		
	Dec. 1977	n.a.	+[illegible]	+[illegible].8		

[1] [illegible]; data include [illegible] construction projects. [2] Local power companies. [3] [illegible] reports; accounting [illegible] December 1978. [4] Illinois Department of Labor; preliminary.

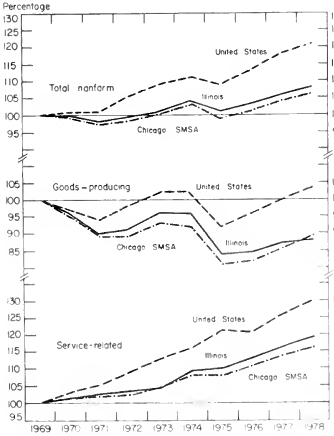
[a] Total for cities listed. [b] Includes immediately surrounding territory. [c] Includes East Moline.

Job Creation in Illinois — A 10-Year Perspective

General trends in nonfarm employment within Illinois and the Chicago Standard Metropolitan Statistical Area (SMSA) are similar to those exhibited in the United States during the last 10 years. Whereas service-related employment has risen from 1969 through 1978 in all three geographic areas, the number of individuals engaged in the production of goods (mainly manufacturing, but also construction and mining) has fluctuated in the national economy, and fallen in the Illinois and Chicago economic regions. Although there is a corresponding pattern in the growth of total employment in these three areas, the percentage increase in employment has been far greater in the country as a whole than in Illinois and the Chicago SMSA during this 10-year period.

The strong steady growth in overall service-related employment can be attributed partly to the mature nature of the United States economy. Given an established industrial sector, such as in the US, when incomes rise individuals tend to consume services at an increasing rate in proportion to manufactured goods. Service-related employment in the United States, which exemplifies this trend, increased from 46 million in 1969 to 60 million in 1978, for a net rise of just over 30 percent. The Illinois and Chicago experience is closely parallel with a gain from 2.74 million to 3.36 million employed in services in the state and from 1.9 million to 2.21 million in the city. These are net gains of 19 percent and 16 percent respectively.

Percentage Change in Nonfarm Employment in the US, Illinois, and the Chicago SMSA, 1969–78 (1969 = 100)



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Employment in the goods-producing sector of the US economy has vacillated from below the 1969 level to slightly above in the 10-year period. Currently there are 25.2 million employed in this sector, which represents a modest net gain of 3 percent from the 1969 employment of 24.3 million. An absolute decline in goods-producing has been characteristic of the Illinois and Chicago economies. The drop in Illinois has been from 1.61 million in 1969 to 1.44 million employed in 1978, representing a net loss of 12 percent of employment in this sector. The similar trend in Chicago has been from a high in 1969 of 1.11 million to the present level of nearly exactly 1 million, a drop of 11 percent during the 10 years.

In contrast to service-related employment, which remained steady during the 1975–76 recession, goods-producing declined sharply during this period. The recovery in this latter sector has also proceeded somewhat slowly, only in 1978 having reached the prerecession level in the United States. This, combined with other strong fluctuations in goods-producing employment over the 10 years, indicates that this sector has been more affected by economic prosperity and recession.

A ramification of this relative long-term drop in goods-producing employment has been to reduce those job opportunities for unemployed individuals lacking special training. These unskilled workers have in the past traditionally found employment in goods-producing industries, whereas service-related workers have tended to be professionally employed or otherwise highly skilled.

The overall growth of total nonfarm employment in Illinois and Chicago has fallen considerably behind that of the United States. The gain in the nation was a net increase of 21 percent. The smaller gain in Illinois was a total of 8 percent. The still smaller total gain in Chicago was a total rise of 6 percent.

Employment growth (job creation) is a prime indicator of the economic vitality of a region. More employment has been created in Illinois since 1969, but not nearly as fast as the average of other states in the union. Whereas in 1969, 6.2 percent of all individuals employed in the United States were in Illinois, currently 5.5 percent of the country's workforce is here. Much of this change may be attributed to natural patterns of population migration providing for a smaller labor pool in Illinois as compared with other areas of the country. However, it is also arguable that jobs have not been created quickly enough to employ all those individuals who would otherwise retain or seek employment within Illinois.

In Illinois, and in the city of Chicago, economic growth has in the past 10 years centered on service-related activities, even to a larger extent than in the country as a whole. An absolute drop in goods-producing employment in both areas has been more than compensated for by gains in service-related employment. It is likely that this pattern will continue, increasing the role of Illinois and Chicago as a service economy for the midwestern region of the country. ROSS KOPLIN

EMPLOYMENT BY TYPE AND MAJOR INDUSTRIAL SOURCES, ILLINOIS COUNTIES, 1976

COUNTY	TOTAL EMPLOY-MENT	NUMBER OF PROPRI-ETORS	WAGE AND SALARY EMPLOYMENT									
			TOTAL	FARM	NON FARM							
					TOTAL	GOVT.	PRIVATE NON FARM					
							TOTAL	MFG.	TRANS. PUBLIC UTIL.	TRADE	SERVICES	OTHER#
ILLINOIS	5119198	415067	4704131	38000	4666131	803911	3862220	1232222	273307	1020104	357277	479310
ADAMS	34448	4737	29711	401	29310	3858	25452	8505	1387	7326	6242	1992
ALEXANDER	4899	741	4158	105	4053	762	3291	1342	286	840	0	823
BOND	5226	1603	3623	162	3461	710	2751	521	144	800	1110	176
BOONE	12531	1452	11079	290	10789	1401	9388	6239	428	1118	1041	562
BROWN	2257	1004	1253	116	1137	352	785	26	68	206	0	485
BUREAU	15373	3713	11660	523	11137	2364	8273	3010	405	2073	1681	1104
CALHOUN	2176	1013	1163	129	1034	449	585	15	25	242	228	75
CARROLL	7603	2146	5457	272	5185	1810	3375	711	616	934	814	300
CASS	5831	1262	4569	216	4353	1021	3332	1271	0	903	0	1158
CHAMPAIGN	81050	6830	74220	743	73477	33371	40106	6403	2451	15163	11033	5056
CHRISTIAN	14246	2762	11484	775	10709	2114	8595	2028	0	2365	0	4202
CLARK	6736	2082	4654	260	4394	1105	3289	874	278	994	569	574
CLAY	5875	1754	4121	78	4043	1202	2841	999	196	762	372	512
CLINTON	10224	2295	7929	253	7676	2529	5147	942	485	1555	1490	675
COLES	22168	2879	19289	309	18980	4732	14248	4868	1371	3684	2739	1586
COOK	2657554	111744	2545810	1369	2544441	341336	2203105	678451	167946	580776	501172	274760
CRAWFORD	9390	1801	7589	144	7445	1241	6204	2754	352	1289	622	1187
CUMBERLAND	3923	1518	2405	108	2297	606	1691	468	0	513	0	710
DE KALB	29558	3450	26108	875	25233	8068	17165	7204	735	5252	2432	1542
DE WITT	6431	1536	4845	199	4646	1195	3451	809	530	1195	0	917
DOUGLAS	8843	1710	7133	324	6809	1255	5554	1624	509	1395	0	2026
DU PAGE	210803	15967	194836	1009	193827	25604	168223	38773	8838	56086	42262	22264
EDGAR	9073	2401	6672	446	6226	1281	4945	2145	0	1225	932	643
EDWARDS	3598	998	2600	115	2485	378	2107	1233	108	387	206	173
EFFINGHAM	15118	2739	12379	207	12172	1864	10308	3344	644	3045	2347	928
FAYETTE	8617	2714	5903	284	5619	1789	3830	1154	255	1305	651	465
FORD	7209	1811	5398	369	5029	1297	3732	1216	226	1023	831	436
FRANKLIN	11692	2506	9186	117	9069	2517	6552	537	452	1542	1450	2571
FULTON	16016	3358	12658	378	12280	2935	9345	2535	430	2142	2033	2205
GALLATIN	3198	756	2442	175	2267	616	1651	210	27	367	152	895
GREENE	5809	2023	3786	417	3369	1031	2338	477	295	762	561	243
GRUNDY	11617	1675	9942	172	9770	1614	8156	2865	1054	2470	969	798
HAMILTON	2977	1347	1630	129	1501	610	891	233	70	304	154	130
HANCOCK	8379	3063	5316	320	4996	1660	3336	475	284	990	1080	507
HARDIN	1750	406	1344	13	1331	368	963	11	72	104	217	559
HENDERSON	2495	1004	1491	272	1219	635	584	17	0	248	137	182

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			TOTAL	FARM	NON FARM							
					TOTAL	GOVT.	PRIVATE NON FARM					
							TOTAL	MFG.	TRANS. PUBLIC UTIL.	TRADE	SERVICES	OTHER#
HENRY	19875	4526	15349	549	14800	3342	11458	2955	912	3933	1948	1710
IROQUOIS	13477	4064	9413	827	8586	2105	6481	2174	249	2088	1331	639
JACKSON	26391	2549	23842	336	23506	10716	12790	1739	1072	4603	3691	1685
JASPER	5049	1823	3226	142	3084	651	2433	664	92	581	248	848
JEFFERSON	16013	2835	13178	147	13031	2213	10818	1535	735	2799	2521	3228
JERSEY	5613	1424	4189	265	3924	1331	2593	378	173	375	944	223
JO DAVIESS	8055	2478	5577	276	5301	1312	3989	1698	217	991	652	431
JOHNSON	2526	974	1552	92	1460	645	815	127	0	352	126	210
KANE	116995	7753	109242	1131	108111	18740	89371	35095	3461	22507	20184	8124
KANKAKEE	43704	4010	39694	812	38882	10500	28382	10139	1455	7372	7063	2353
KENDALL	15356	1525	13831	359	13472	1485	11987	8891	187	1194	1294	421
KNOX	31200	3601	27599	525	27074	5430	21644	8717	1836	5346	3879	1866
LAKE	176893	11444	165449	1150	164299	49337	114962	42296	4270	30091	25903	12402
LA SALLE	49899	7182	42717	775	41942	5950	35992	15470	2270	9044	6154	3054
LAWRENCE	6430	1277	5153	171	4982	1097	3885	916	173	828	900	1068
LEE	16249	2895	13354	277	13077	5204	7873	2439	655	2092	1935	752
LIVINGSTON	17189	3995	13194	562	12632	3731	8901	2618	425	2491	2036	1331
LOGAN	16074	2522	13552	491	13061	4454	8607	2677	483	2175	2558	714
MCDONOUGH	14535	2887	11648	340	11308	3701	7607	2129	377	2963	1443	695
MCHENRY	44808	5548	39260	1301	37959	5445	32514	15361	1113	7298	5077	3665
MCLEAN	53180	6254	46926	1090	45836	8767	37069	6731	3017	10408	8191	8722
MACON	61881	4918	56963	422	56541	6912	49629	18755	4152	11106	9895	5721
MACOUPIN	15540	4125	11415	510	10905	2846	8059	1072	602	2418	2190	1777
MADISON	92854	7948	84906	541	84365	13758	70607	29431	4876	15134	14398	6768
MARION	17684	3231	14453	147	14306	2714	11592	3154	1263	2974	2565	1636
MARSHALL	4674	1367	3307	181	3126	757	2369	722	132	793	348	374
MASON	6539	1663	4876	409	4467	1376	3091	833	206	1148	432	422
MASSAC	5110	1128	3982	68	3914	1082	2832	992	565	501	482	292
MENARD	3626	1151	2475	292	2183	810	1373	256	171	438	302	206
MERCER	5559	2096	3463	387	3076	1412	1664	133	187	744	358	242
MONROE	4914	1607	3307	320	2937	787	2200	85	215	839	555	506
MONTGOMERY	13381	3173	10208	262	9946	1725	8221	2254	698	2416	1533	1320
MORGAN	19012	2661	16351	438	15913	4710	11203	3224	879	3005	2894	1201
MOULTRIE	4706	1421	3285	197	3088	772	2316	430	112	850	627	297
OGLE	18294	3475	14819	896	13923	2714	11209	5798	300	2663	1499	949
PEORIA	105956	7074	98882	293	98589	13451	85138	22908	4756	24056	22183	11235

EMPLOYMENT BY TYPE AND MAJOR INDUSTRIAL SOURCES, ILLINOIS COUNTIES, 1976

COUNTY	TOTAL EMPLOY-MENT	NUMBER OF PROPRI-ETORS	WAGE AND SALARY EMPLOYMENT									
			TOTAL	FARM	NON FARM							
					TOTAL	GOVT.	PRIVATE NON FARM					
							TOTAL	MFG.	TRANS. PUBLIC UTIL.	TRADE	SERVICES	OTHER#
PERRY	8690	1657	7033	127	6906	1244	5662	1840	198	912	883	1829
PIATT	6035	1563	4472	369	4103	1380	2723	455	234	854	841	339
PIKE	7876	2798	5078	685	4393	1289	3104	612	239	1049	775	429
POPE	1093	546	547	81	466	272	194	0	0	58	0	136
PULASKI	3298	698	2600	78	2522	686	1836	228	93	278	1159	78
PUTNAM	2470	541	1929	142	1787	420	1367	876	0	191	108	192
RANDOLPH	14230	2757	11473	239	11234	2860	8374	3294	836	1541	1327	1376
RICHLAND	3822	1607	7215	93	7122	1769	5353	2200	393	1172	876	712
ROCK ISLAND	90883	5132	85751	228	85523	20837	64686	27441	4080	16251	10955	5959
ST. CLAIR	88361	7349	81012	339	80673	21603	59070	11145	6738	15733	17226	8228
SALINE	9186	1756	7430	74	7356	2078	5278	351	508	1534	1510	1375
SANGAMON	94318	7474	86844	830	86014	27348	58666	8354	4851	16454	17969	11038
SCHUYLER	3303	1348	1955	202	1753	749	1004	78	37	454	258	177
SCOTT	2560	790	1770	148	1622	481	1141	83	104	319	113	517
SHELBY	7298	2916	4382	252	4130	1446	2684	546	217	891	624	406
STARK	2641	982	1659	189	1470	520	950	184	21	386	155	204
STEPHENSON	23615	3499	20116	468	19648	3113	16535	7794	556	2960	2703	2522
TAZEWELL	57146	3813	53333	321	53012	6015	46997	27617	2232	8175	4474	4499
UNION	7699	1493	6206	270	5936	3009	2927	1328	210	582	537	270
VERMILION	44629	4671	39958	695	39263	6945	32318	13128	2241	7003	6599	3347
WABASH	6523	1043	5480	93	5387	933	4454	1453	183	780	671	1367
WARREN	8925	2202	6723	432	6291	1469	4822	1098	271	1784	1282	387
WASHINGTON	5329	2016	3313	241	3072	904	2168	397	169	632	673	297
WAYNE	7789	2528	5261	198	5063	1093	3970	1232	227	1101	730	680
WHITE	6764	1892	4872	187	4685	1299	3386	346	260	1213	619	948
WHITESIDE	26740	3115	23625	438	23187	4155	19032	9711	661	4302	3108	1250
WILL	86985	7051	79934	545	79389	14830	64559	22275	7034	15832	12514	6904
WILLIAMSON	19160	2441	16719	55	16664	3521	13143	3757	1224	3357	1897	2908
WINNEBAGO	113495	7445	106050	310	105740	11818	93922	44273	4392	21953	16560	6744
WOODFORD	9401	2490	6911	616	6295	1663	4632	1041	281	1698	1162	450

INCLUDES MINING, CONSTRUCTION, FINANCE-INSURANCE-REAL ESTATE, AND OTHER INDUSTRIES.
0: NOT SHOWN TO AVOID DISCLOSURE OF CONFIDENTIAL INFORMATION. DATA INCLUDED IN TOTALS.
SOURCE: US DEPARTMENT OF COMMERCE BUREAU OF ECONOMIC ANALYSIS.

A Changing Federal Budget

THOMAS B. BRYAN

The federal government's budget has experienced a remarkable growth over the last quarter-century. In addition, its composition has changed dramatically. The change is in evidence on both the expenditures and receipts side of the budget. It is the purpose of this article to examine these trends and their possible implications.

Federal Expenditures

Federal government expenditures have outpaced the growth of the nation's gross national product over the last quarter-century. Since 1950 the annual growth in GNP has averaged 7.2 percent while total federal government expenditures have grown at a 9 percent rate.

The chief compositional change in federal expenditures has been the relative decline in purchases of goods and services and the rise in transfer payments and grants-in-aid to state and local governments (see the table and Chart 1). Twenty-five years ago purchases of goods and services constituted 75 percent of federal expenditures. Transfer payments and grants-in-aid accounted for only 15 percent and 4 percent, respectively. By fiscal 1978, purchases of goods and services had declined to just 35 percent of federal expenditures, while transfer payments had risen to over 40 percent of total expenditures, with grants-in-aid accounting for 16 percent.

In terms of GNP, direct federal purchases of goods and services have dropped from 16 percent to 8 percent over the last 25 years. The major reason for the decline has been the fall in military expenditures relative to total federal outlays. Whereas in the mid-1950s military expenditures accounted for 56 percent of total federal government outlays (or 7.7 percent of GNP), in 1977 they accounted for only 22 percent of total expenditures (just under 5 percent of GNP). Although military expenditures constitute nearly two-thirds of federal goods and services expenditures, defense outlays currently account for a lower proportion of total budget outlays than at any time since World War II.

Other major components of federal goods and services expenditures include space exploration; federal law enforcement; construction of flood control and navigation projects; operation of the federal airway system; medical and other scientific research; operation of national forest, park, and recreation areas, and capital expenditures of government-sponsored enterprises. These federal purchases are relatively controllable, since a large proportion are subject to the appropriations process. Consequently they are among the first to be affected when the government attempts to restrain budget expenditures, with many having been held down or cut in recent years.

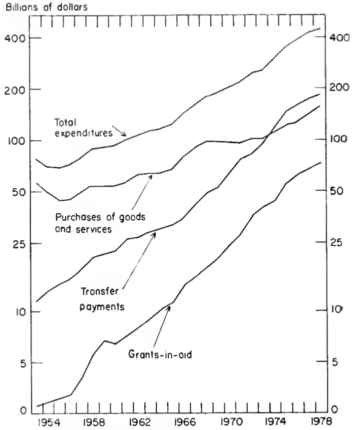
Transfer payments represent government actions to redistribute income, and thereby shift spending decisions from one sector of the economy to another. Whereas government purchases of goods and services determine *what* will be produced, transfer payments affect *who* will decide what goods to produce.

The major programs that fall under the heading of

Federal Government Budget

	1960		1970		1978	
	Billions of dollars	Percent of total	Billions of dollars	Percent of total	Billions of dollars	Percent of total
Expenditures						
Purchases of goods and services	53.7	57.7	95.6	46.9	159.4	35.3
Transfer payments	23.4	25.2	63.5	31.1	181.4	40.2
Grants-in-aid	6.5	7.0	24.4	11.9	72.4	16.1
Net interest payments	6.8	7.3	14.3	7.0	28.2	6.3
Other expenditures	2.6	2.8	6.4	3.1	9.4	2.1
Total expenditures	93.1	100.0	204.2	100.0	450.8	100.0
Receipts						
Personal income tax	41.8	43.5	90.7	47.1	180.9	[illegible]
Corporate income tax	21.4	22.3	30.8	16.0	60.[illegible]	[illegible]
Social security tax	17.6	18.3	49.7	25.[illegible]	123.[illegible]	[illegible]
Indirect business tax and nontax accruals	13.4	14.0	19.3	10.[illegible]	[illegible]	[illegible]
Other receipts	1.8	1.9	1.8	0.9	7.4	1.8
Total receipts	96.1	100.0	192.1	100.0	[illegible]	100.0
BUDGET SURPLUS (DEFICIT)	3.0		(1[illegible].1)		(48.8)	

Chart 1. Federal Government Expenditures



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federal transfer payments include social security benefits, unemployment insurance, medicare and medicaid, federal pensions (civilian, military, and veterans'), and public assistance programs — such as food stamps and housing assistance.

As already pointed out, federal expenditures for transfer programs have risen sharply over the past 25 years. With a 14 percent annual rate of growth since 1970, most of the rise has taken place over the past decade. Payments of social security benefits have tripled since 1970, reaching a level of $97.7 billion in 1977. Expenditures for medicare and medicaid rose even more rapidly, and now account for $36 billion of budget expenditures. Outlays for some of the smaller programs, such as food stamps, rose ninefold during the 1970s, reaching more than $5.6 billion.

The growing importance of transfer payments in the budget impose important constraints on the policymakers' ability to hold down federal spending. Many of the programs that make up transfer payments are of an "open-ended" nature. Once the program is established, funds are distributed without specific congressional appropriations, but are disbursed in response to developing economic conditions. Under many transfer programs, payments increase automatically with an economic downturn. Incorporated in many programs of an "income security" nature are provisions for regular cost-of-living adjustments. As a result inflation has an automatic expenditure impact. Another contributing factor to the growth of transfer payments has been rising health care costs which are absorbed by the medicare and medicaid programs.

Demographic factors have also played a major role in the growth of transfer outlays. Age determines eligibility for benefits under many of the programs. Some welfare programs, such as aid for dependent children and child nutrition, are geared for the young of the population. Benefits from other programs, such as social security and federal pensions, go to the aged. These latter programs are proportionately much larger than those designed for the young. With the increased average age of our population, strong upward pressures on outlays for the aged far outweigh the declines in benefits to the young.

In short, as programs presently exist, economic conditions, not necessarily legislators, have largely determined the growth of federal transfer payments.

There is a view that the impact of government expenditures on economic growth is lessened as transfer payments assume an increasingly important role. It is believed that a dollar of expenditure on goods and services has both a more immediate and a larger stimulative impact on expanding the economy than a dollar spent on transfer payments. Both economic theory and empirical evidence suggest this to be the case. A large proportion of the monies spent for goods and services go directly to the business sector. It is believed that an increase in those expenditures leads to increased production, output, employment, and to other spillover benefits — such as technological advancements. Thus, the relative declines in expenditures for goods and services has possibly blunted the expansionary effect of total budget expenditures during the 1970s.

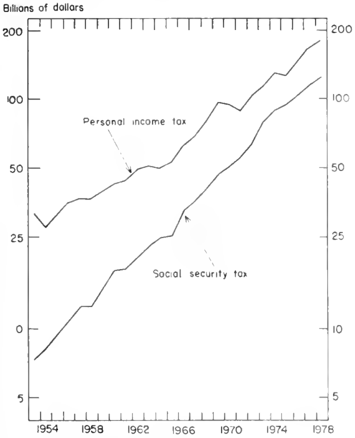
Federal grants-in-aid have assumed an increased importance in the makeup of the federal budget. Federal grants accounted for only 7 percent of total federal expenditures in 1960, compared with the current 16 percent. During the 1970s, grants have grown at an average annual rate of 14.6 percent. This trend reflects many of the same factors that induced the surging growth of transfer payments (inflation, health care costs, and so on). It also reflects the advent of general revenue sharing in the early 1970s.

Federal grants-in-aid programs transfer resource-use decisions from the private sector to the state and local governments — by way of the federal government. These grants, counted as federal government expenditures, are receipts of state and local governments. In 1978, grants constituted nearly 23 percent of state and local government receipts. A large part of the funds flows back to the private sector through state and local government transfer payment programs. Income security and health care programs receive 36 percent of the federal monies. Programs relating to education, employment training, and social services spend another 24 percent of grants-in-aid funds.

Net benefits to states from this type of aid are difficult to assess. The spending decisions are removed from the financing decision. In order to assess the economic impact of the upswing in federal grants it is important to look at how the grants are financed.

To the extent that federal aid to states is financed by federal taxes, resources are first transferred to the federal government and then to the state and local gov-

Chart 2. Personal Income Tax and Social Security Receipts



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ernments. The net benefit to any state emerges from a comparison of that state's federal tax liability with its grants-in-aid receipts. The average amount of federal aid received per dollar of federal tax liability is 19 cents nationally. However, federal aid ranges from 12 cents per dollar of federal tax liability in Indiana to 53 cents per dollar in Alaska. Illinois receives about 15 cents of federal aid on every dollar of federal tax liability.

Finally, net interest payments have played a considerable role in the federal budget. Net interest payments consist of the interest paid by the government on the national debt less interest received. These payments have grown at about the same rate as total expenditures. Difficulty in holding down this expenditure item will persist into the foreseeable future because of both the size and the maturity structure of the federal debt.

Federal Receipts

Federal government receipts have increased from \$194 billion in 1970 to about \$402 billion in fiscal 1978, an average annual rate of increase of about 9.5 percent. The receipts of the federal government are derived from individual income taxes, corporate income taxes, indirect business taxes and nontax accruals (that is, excise taxes, customs duties, and penalty fees), and social security taxes (see table).

There has been a marked change in the composition of federal receipts. The personal income tax has declined as a portion of total federal receipts, with social security taxes having grown increasingly important as sources of funds (see Chart 2).

For years the individual income tax has been the mainstay of the US tax system. Despite its broad base and progressive rate structure (that is, the applicable tax increases as the individual's tax base grows), the share of revenue produced by the personal income tax has actually declined from 48 percent of total receipts to 45 percent since 1970.

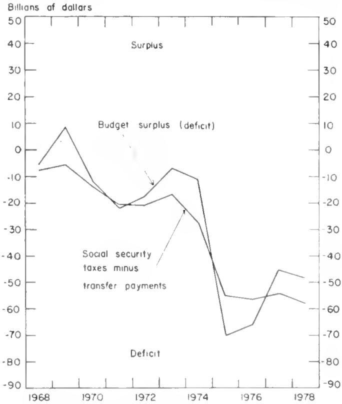
Corporations benefited from a number of tax reductions during the 1970s. However, the strong growth in inflation has tended to counter the effects of these reductions. Inflation has gorged the measured profits of many firms. Thus, during this decade there has been little change in the share of revenue produced from corporate income tax payments.

The share of receipts accounted for by indirect business taxes and nontax accruals has declined over the past eight years. In 1970 these taxes accounted for 10 percent of total revenue; however, by 1978 indirect business taxes had declined to 7.5 percent. The reduction primarily reflects excise tax cuts of the early 1970s.

During the same period, the share of total revenue produced by social security taxes increased by 5 percent. Growing at a 12.2 percent annual rate since 1970, the rise in social security tax revenues reflects increases in both payroll tax rates and in the taxable wage base.

The social security tax is regarded as a regressive tax. Workers must remit half of the 12.1 percent payroll tax on their first dollar of earnings. A lower-paid worker must pay a larger proportion of his income for this tax than would an individual with a substantial income. In 1979 this tax will take 6.05 percent of the first \$17,700 of income — whether the worker is earning \$7,700, \$17,000, or \$170,000. Next year workers will be taxed 6.13 percent of the first \$22,000.

Chart 3. Deficit Financing of Transfer Payments



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The other half of the 12.1 percent payroll tax is paid by the employer. It is believed that this share is largely passed on to the consumer in the form of higher prices. Thus, a change in the payroll tax — such as we have experienced this year and will again experience next year — is likely to have a greater effect on the rate of inflation than would a change in personal income taxes.

Federal Borrowing

Even though federal government receipts rose at a 9.5 percent rate over the decade, federal expenditures rose even more rapidly. As a result there has been a federal budget deficit in every year of the current decade. During the 1970s federal deficits have been unusually large, amounting to more than $20 billion in fiscal 1971 and 1972, and then rising to $66 billion in 1976, $45 billion in 1977, and roughly $49 billion in fiscal 1978. As a result of the series of deficits registered thus far, the US Treasury has been confronted by a formidable financing task.

The economic implications of persistent and large federal deficits are serious. To the extent that federal expenditures are financed by borrowing from the general public, resources are transferred from the private sector to the public sector. Government borrowing represents an increased demand for credit. There is a view that federal borrowing will put upward pressure on interest rates. Higher interest rates may lead to reductions in private investment and consumption. In turn, these reductions exert downward pressures on the level of output and employment.

Alternatively, the federal government's deficit may be financed by borrowing from the Federal Reserve (either directly or indirectly). To this extent, federal expenditures are financed, in effect, by printing money — or what is more formally called "monetizing the debt." Increased monetary expansion may add to inflationary pressures over an extended period.

It is possible to argue that the majority of the funds raised through debt financing go directly for increases in spending for social programs. Even though social security taxes have expanded more rapidly than any other federal tax (from $40.8 billion in 1968 to $123.5 billion in 1978), these taxes have not kept pace with the rise in expenditures for social programs. Social program expenditures have increased over the past 10 years from $48.1 billion to $180.4 billion. The large difference between expenditures on social programs and social security tax receipts have been highly correlated with federal budget deficits (see Chart 3).

In contrast, federal purchases of goods and services closely parallel personal income tax receipts. Between 1950 and 1975 personal tax receipts increased from $18 billion to $126 billion, while purchases of goods and services rose from $19 billion to $124 billion.

Conclusion

Although there has been much concern about the increasing size of federal government expenditures, little attention has been focused on the changing composition of those expenditures. Likewise, even though there is much concern about growing taxes and large budget deficits, insufficient attention has been given to identifying their causes.

The evidence appears to pin the blame for regular federal budget deficits firmly on growing transfer payments. It could be argued, however, that the major contributing factor in the growth of transfer payments has been legislators' willingness to let deficit spending persist. If transfer payments had to be financed with tax receipts, it is unlikely that legislators would have tolerated them at their current levels. Politically, very few legislators would be able to push for tax increases of the magnitude necessary to finance current levels of social spending.

Whatever the underlying cause of transfer payment growth, the evidence suggests that the techniques used in their financing are working counter to the intention of the expenditures. Couple the regressive features of the social security tax with the inflationary pressure inherent in deficit spending, and it can be seen that a substantial burden is being placed on the bottom two-thirds of the American income pyramid.

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Unemployment and Inflation: But Not Stagflation

The economy appears to be in the early stages of a cyclical slowdown. If so, unemployment is likely to edge higher as the year unfolds. At the same time, there is a strong probability that inflation will continue near its double-digit rate. As these events materialize, there again will be a strident hue and cry about "stagflation."

The chief thrust of this article is that recent and ongoing economic developments are *not* symptomatic of stagflation. Beyond that, the misuse of the term amounts to more than a breach of economic etiquette. It has led to a cacophony of economic prescriptions, serving chiefly to postpone economic initiatives that might stand a reasonable chance of ameliorating conditions at hand.

Recent Economic Performance

Economic activity slowed in the first quarter. Real GNP — that is, gross national product adjusted for the estimated effects of inflation — moved upward at a 0.7 percent annual rate from the final quarter of 1978 to the first quarter of this year. Such an increase is well within the bounds of statistical error. Thus, as figures are revised in coming months, the first quarter may show a moderate decline.

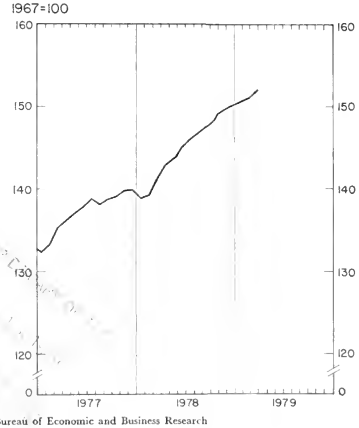
The first quarter slowdown was widespread. Consumer spending rose more slowly than in the preceding quarter, as the flow of household saving rose to 5.2 percent of after-tax income (compared with 4.8 percent in the fourth quarter of 1978). Business spending was mixed; inventory accumulation quickened, but fixed investment moderated. Government's annual rate of spending rose only $5 billion, compared with nearly a $15 billion increase in the preceding quarter. Finally, the nation's net export position deteriorated at a $2.7 billion rate; in contrast, during the fourth quarter net exports registered a $3.1 billion gain.

The current weakening in the economy is cyclical. It has resulted from revisions in economic positions, in light of unsustainable increases in "position-making" costs. Households and business firms have found themselves trapped within a web of rising costs. Increasingly, they have found themselves unable to recoup rising costs by wage increases or higher prices of goods sold. To adjust, it has become necessary to cut back. Households are attempting to reduce their rate of consumption growth; they need to repair their savings positions. Business firms that are unable to push all costs forward are likely to continue postponing investment projects.

Longer-Run Trends

Notwithstanding the current pause in activity, the economy has turned in a strong performance since the 1973–75 recession. During this period, the annual real growth in GNP has averaged 4.9 percent. In the 1965–75 decade, real GNP rose at an average annual rate of 2.6 percent. During the 20-year period ending in 1978, real growth averaged 3.5 percent per annum.

Industrial Production



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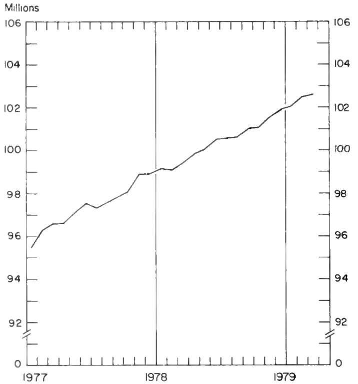
The Illinois Coal Industry in Transition — A Bright Future? *By Ross Koplin* / *Page 9*

Employment



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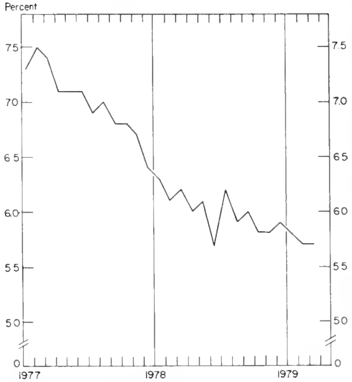
Unemployment Rates



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Employment growth has been extremely strong during the period since the prerecession peak in 1973, with an expansion of more than 11 million jobs. In recent months, about 60 percent of the population of working age has been employed. Such an intensive employment rate is without precedent in this nation. Unfortunately, the rise in employment has been chiefly accommodated by new entrants into the labor market, rather than by a corresponding decline in unemployment. As a result, the unemployment rate, at 5.7 percent in mid-March, remains well above the level usually reached at the peak of a business cycle. Even so, the unemployment rate has fallen by about 3.5 percentage points since the spring of 1975.

Among the unemployed men who have lost jobs, more than half are under 20 years of age. Sixty-five percent of the unemployed men over 20 years of age are unmarried. Thus, the traditional "breadwinner" constitutes only about one-third of the unemployed men. Among unemployed women, nearly half are married. In short, the high unemployment statistics suggest that young people are having a difficult time getting and holding a job; they do not reflect the degree of hardship that has historically accompanied such unemployment.

The Economic Policy Background

Out of this nation's experience during the 1930s there emerged an economic policy attitude that has remained essentially unchanged. There is a presumption that federal economic policy will be stimulative as long as the economy is operating below full employment; this policy will turn restrictive as inflation accelerates.

Fiscal actions have remained inordinately expansive since 1973, instead of moderating as inflation accelerated. In the 1973–75 period, roughly corresponding to the recession, federal expenditures rose at a 15 percent annual rate. The budget deficit averaged $21.6 billion. Since that period, federal outlays have risen at an 11 percent rate, and the deficit has averaged about $40 billion. By comparison, over the preceding two decades, federal expenditures expanded at an average annual rate of 6.1 percent.

Similarly, money supply growth has been rapid in both recession and economic expansion. From 1973 to 1975 the money supply expanded at an average rate of 5 percent per annum. Since 1975 it has risen at nearly a 7 percent annual rate. Only since November 1978 has the growth in money been stalled.

Some economic analysts argue that economic policy has tightened. As evidence, they point to a tightening in credit markets. Interest rates jumped sharply from August to November of last year. During that period the money supply also experienced a rapid increase. Both

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interest rates and the pace of monetary expansion have stabilized since last fall.

Alternatively, there is a view of the money supply process suggesting that its changes are *caused* by the ebb and flow of the economy. As economic activity quickens and there develops upward pressure on interest rates, the Federal Reserve tends to accommodate the expansion. But as the economy weakens and upward interest rate pressures abate, money supply growth tends to moderate. It is this view of the money supply process that is most consistent with developments since 1973.

To some extent, the expansive fiscal and monetary policy stance has been intentional. Policymakers have been reluctant to take action that might lead to higher unemployment. In another vein, the hope has persisted that President Carter's voluntary wage-price restraint program would result in a diminution of inflation without reducing aggregate demand. It is my view that these hopes will, at length, be smashed by monthly inflation statistics. Policy timidity is likely to be replaced by an overwhelming temptation to go for a quick solution. I expect policymakers to be slow to counter the emerging economic weakness. Indeed, they may nudge it along — if only through inadvertence.

The remainder of the story has been told many many times. As unemployment mounts, policy measures will be set in motion to rebuild aggregate demand. We will reflate too fast. Inflation will again accelerate. But this is the story of the next half-decade. WILLIAM R. BRYAN

The Consumer Price Index and the Producer Price Index

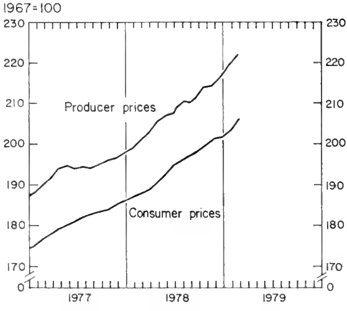
Beginning with this issue, the *Illinois Business Review* will report the Bureau of Labor Statistics' recently introduced Consumer Price Index for All Urban Consumers and the Producer Price Index for All Commodities.

Previously the CPI measured the changes in the price of goods and services purchased by typical urban wage earners and clerical workers. The new CPI for All Urban Consumers includes coverage of the typical "market basket" of not only urban wage earners and clerical workers, but also of professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force. Whereas the old CPI covered approximately 40 percent of the national population, the new index covers roughly 80 percent of the total noninstitutional civilian population of the US. Excluded from this new CPI are persons in military service and in institutions, and those living outside urban areas.

In an effort to improve this economic indicator, changes have also been made in the selection, collection, and weighting of the price data used in the index.

The Producer Price Index measures average changes in prices received by producers of commodities in primary markets. Previously, price data of this nature were presented as the Wholesale Price Index. The Bureau of Labor Statistics believes that the term "Producer Price Index" more accurately reflects the coverage of the data. The sample used for calculation of producer prices consists of some 10,000 price quotations on nearly 2,800 commodities in all stages of processing.

Producer and Consumer Price Indexes



Bureau of Economic and Business Research

Local Illinois Developments

Total Construction Declines

Construction in Illinois declined in 1978. The average value of newly constructed single-family units rose.

Residential construction declined 18 percent from 1977 to 1978. Excluding additions and alterations, 42,377 new residential buildings were constructed in 1978, nearly 10,000 less than in 1977. The majority of the new residential construction was in the form of single-family units (including semidetached, row, and town houses). Constituting 93 percent of the total residential construction, over 39,000 one-family houses were built in 1978. A total of 1,872 single-family units was demolished in 1978. This figure is 17 percent less than the number demolished in 1977. Relative to demolition rates in other categories of residential construction, 17 percent does not seem to be a significant decline.

The share of apartments in the total Illinois housing stock rose in 1978. Apartment complexes of five-or-more units accounted for nearly 5 percent of total new residential construction in Illinois in both 1977 and 1978. Apartment construction declined by 11 percent from 1977 to 1978 as the number of new units put in place fell from 1,622 to 1,488. Demolitions also declined during this period by 33 percent. While the share of apartments has risen in the past year, appropriate figures on the housing stock in Illinois are not available to determine whether this is part of a long-run trend.

Duplex construction, constituting approximately 2 percent of total new residential construction in Illinois, fell 15 percent in 1978. Indeed, the number of two-family buildings constructed in 1978 barely replaced the number destroyed in the preceding year. There were 813 buildings demolished in 1977 and 842 constructed in 1978.

Construction of three-to-four-family buildings fell by 23 percent last year. However, such construction accounts for only about 1 percent of the total new residential construction in Illinois. Demolitions in this category were reduced by 26 percent, leaving the total stock of three-to-four-family buildings relatively unchanged.

According to figures published by the US Department of Commerce and compiled by C-S. Cheung of the Bureau of Economic and Business Research at the University of Illinois, the average value of newly constructed single-family units in Illinois rose from $41,000 in August 1977, to $49,000 in August 1978. The average value of newly constructed single-family units for some Illinois counties in August 1978 is shown in the table.

Average value differentials by county may be explained in part by the age composition and real income level of the county. These two factors, along with the cost of financing a home, also affect housing demand. In turn, housing demand is an important determinant of residential construction. Mortgage rates in Illinois were driven up in 1978 as US fiscal and monetary policy directed toward reducing inflation caused funds available for lending to become more expensive to financial institutions. To the extent that housing is viewed as an anti-inflation hedge and expectations of a substantial fall in interest rates are tenuous, the impact of higher mortgage rates on housing demand seems likely to be less than in the past.

Residential construction in Illinois will be aided by federal subsidies totaling about $53.7 million in 1979. These subsidies have been made available for building and rehabilitating some 11,900 housing units for the poor and elderly. The value of construction ultimately to be produced by the $53.7 million has been estimated at $179 million.

Nonresidential construction also declined in Illinois during 1978. The number of nonresidential units constructed last year reached nearly 27,000, 36 percent of total construction in the State. The composition of nonresidential construction remained about the same. Over one-half of the construction classified as nonresidential was involved in the building of residential garages and carports. Stores and other mercantile buildings accounted for 6 percent of total nonresidential construction, while only approximately 5 percent consisted of industrial buildings.

Average Value of Newly Constructed Single-Family Units by Selected County -- August 1978

Average value by county (thousands of dollars)	New units
25-29	
Crawford	9
Franklin	4
Marion	15
Monroe	12
30-34	
Christian	22
Coles	14
Fulton	20
Mercer	8
Sangamon	277
Stephenson	33
Vermilion	6
Winnebago	283
35-39	
Champaign	121
Knox	28
La Salle	13
Randolph	9
40-44	
Jackson	12
McDonough	89
McLean	79
Morgan	18
Moultrie	3
Ogle	21
Rock Island	56
45-49	
Cook	1,906
Henry	37
Logan	7
Macon	70
Madison	112
Whiteside	138
50-54	
Boone	18
Douglas	6
Du Page	953
Effingham	137
Jefferson	6
Kendall	23
Kane	193
Lee	8
Peoria	42
Tazewell	46
Will	210
Williamson	13
55-59	
De Kalb	7
Kankakee	[illegible]
Lake	[illegible]
McHenry	141
60 and above	
Grundy	[illegible]
Livingston	[illegible]
Woodford	109

Transient hotels, motels, tourist courts, and cabins are classified as nonhousekeeping residential buildings, and accounted for less than 1 percent of the total new construction for the State.

Illinois authorized more housing units in 1978 than any other state in the Great Lakes Region. Housing units authorized ranged from slightly over 2,000 to approximately 7,800 per month.

Comparative Economic Data for Selected Illinois Cities, January 1979

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4]
ILLINOIS		$ 28,770[a]	3,653.1[a]	$45,311[a]	4,969	5.7
Percentage change from	Dec. 1978	-73.[illegible]	+2.9	-10.6		
	Jan. 1978	-26.[illegible]	-2.5	+10.4		
NORTHERN ILLINOIS						
Chicago		$ 16,381	1,817.9	$34,126	n.a.	n.a.
Percentage change from	Dec. 1978	-79.6	+6.[illegible]	-10.3		
	Jan. 1978	-34.[illegible]	-[illegible].8	+10.3		
Aurora		$ 755	144.7	$ 552	n.a.	n.a.
Percentage change from	Dec. 1978	-63.[illegible]	-7.0	-15.[illegible]		
	Jan. 1978	+47.7	-0.2	+17.[illegible]		
Elgin		$ 87	94.6	$ 645	n.a.	n.a.
Percentage change from	Dec. 1978	-95.2	+3.6	-15.6		
	Jan. 1978	-89.4	-0.6	+27.4		
Joliet		$ 202	420.9	$ 319	n.a.	n.a.
Percentage change from	Dec. 1978	-63.7	+4.6	-32.4		
	Jan. 1978	-55.2	-10.6	+3.2		
Kankakee		$ 76	84.9[b]	$ 226	n.a.	n.a.
Percentage change from	Dec. 1978	-96.5	+7.0	-14.0		
	Jan. 1978	-21.[illegible]	+9.7	+22.1		
Rock Island-Moline		$ 3,385	128.8[c]	$ 1,055	n.a.	n.a.
Percentage change from	Dec. 1978	+2[illegible].8	-[illegible].1	-17.[illegible]		
	Jan. 1978	+17[illegible].	+[illegible].7	-2[illegible].4		
Rockford		$ 985	174.0	$ 1,216	n.a.	n.a.
Percentage change from	Dec. 1978	-52.[illegible]	+5.9	0.0		
	Jan. 1978	-42.8	+4.0	+44.7		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 758	49.2	$ 951	n.a.	n.a.
Percentage change from	Dec. 1978	-[illegible].4	+11.[illegible]	-4.[illegible]		
	Jan. 1978	+13.[illegible]	+2.2	+6.[illegible]		
Champaign-Urbana		$ [illegible]	5[illegible].0	$ 638	n.a.	n.a.
Percentage change from	Dec. 1978	-[illegible]	+9.[illegible]	-16.[illegible]		
	Jan. 1978	-[illegible]	+9.[illegible]	-8.2		
Danville		$ [illegible]35	48.[illegible]	$ 216	n.a.	n.a.
Percentage change from	Dec. 1978	+[illegible]	+3.[illegible]	-22.[illegible]		
	Jan. 1978	+[illegible]	+3.1	-[illegible]		
Decatur		$ [illegible]	122.[illegible]	$ [illegible]	n.a.	n.a.
Percentage change from	Dec. 1978	-[illegible]	+[illegible]	-[illegible]		
	Jan. 1978	-[illegible]	+5.8	+[illegible]		
Galesburg		$ [illegible]	32.3[b]	$ 1[illegible]8	n.a.	n.a.
Percentage change from	Dec. 1978	+[illegible]	+4.8	[illegible]		
	Jan. 1978	+[illegible]3.4	+4.8	-4.5		
Peoria		$ 317	203.9	$ 1,38[illegible]	n.a.	n.a.
Percentage change from	Dec. 1978	-[illegible]	+[illegible]	-3.[illegible]		
	Jan. 1978	-[illegible]	+[illegible]	+[illegible]		
Quincy		$ 13[illegible]	[illegible]3.3	[illegible]	n.a.	n.a.
Percentage change from	Dec. 1978	-4[illegible]	-3.[illegible]	-[illegible]		
	Jan. 1978	-[illegible]	-[illegible]	-[illegible]		
Springfield		[illegible]	1[illegible]	[illegible]	n.a.	n.a.
Percentage change from	Dec. 1978	+[illegible]	+[illegible]	-[illegible]		
	Jan. 1978	-[illegible]	+5.[illegible]	+[illegible]		
SOUTHERN ILLINOIS						
East St. Louis		[illegible]	[illegible].1	[illegible]	n.a.	n.a.
Percentage change from	Dec. 1978	-[illegible]	+[illegible]	-[illegible]		
	Jan. 1978	-[illegible]	-[illegible]	+[illegible]		
Alton		$ [illegible]	[illegible]	[illegible]	n.a.	n.a.
Percentage change from	Dec. 1978	+[illegible]	+[illegible]	-[illegible]		
	Jan. 1978	+[illegible]	+[illegible]	+[illegible]		
Belleville		[illegible]	[illegible]	[illegible]	n.a.	n.a.
Percentage change from	Dec. 1978	[illegible]	+[illegible]	-[illegible]		
	Jan. 1978	-[illegible]	+[illegible]	[illegible]		
Carbondale-Murphysboro		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percentage change from	Dec. 1978	-[illegible]	+[illegible]	-[illegible]		
	Jan. 1978	-[illegible]	+[illegible]	+[illegible]		

[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local [illegible] accounting period ending [illegible] January 1979. [4]Illinois Department of [illegible], preliminary.

[a]Total for cities listed. [b]Includes immediately surrounding territory. [c]Includes [illegible].

	Total personal income			Per capita income		Population (thousands)
	Dollars (millions)	Percent change		Dollars	Percent of national average	
		1976-77	1969-77			
United States	1,520,070	11	106	7,026	100	216,339
Great Lakes	303,531	11	94	7,393	105	41,057
Illinois	89,404	9	88	7,951	113	11,245
Indiana	36,894	11	99	6,922	99	5,330
Michigan	69,438	13	100	7,606	108	9,129
Ohio	75,871	11	90	7,090	101	10,701
Wisconsin	31,925	13	109	6,864	98	4,651
SMSAs						
Bloomington-Normal	819	10	119	6,889	98	119
Champaign-Urbana	1,069	9	95	6,346	90	168
Chicago	59,800	9	86	8,522	121	7,017
Davenport-Rock Island-Moline	2,935	11	111	7,829	111	374
Decatur	979	9	103	7,664	109	127
Kankakee	675	9	90	7,040	100	96
Peoria	2,936	9	120	8,113	115	362
Rockford	2,030	10	88	7,584	108	267
Springfield	1,464	8	111	7,859	112	186
St. Louis	17,905	11	92	7,524	107	2,379
Counties						
Sum of SMSA counties	75,423	9	89	8,248	117	9,144
Sum of Non-SMSA counties	13,980	10	108	6,656	95	2,100
Adams	489	9	98	7,071	101	69
Alexander	56	8	104	4,761	68	11
Bond	88	10	117	6,022	86	14
Boone	205	10	104	7,740	110	26
Brown	30	15	100	5,605	80	5
Bureau	274	12	99	7,423	106	37
Calhoun	32	10	125	5,758	82	5
Carroll	107	9	55	5,744	82	18
Cass	97	10	98	6,897	98	14
Champaign	1,069	9	95	6,346	90	168
Christian	280	11	115	7,613	108	36
Clark	97	9	82	5,901	84	16
Clay	80	11	113	5,396	77	15
Clinton	177	9	109	5,747	82	30
Coles	314	10	115	6,326	90	49
Cook	45,309	9	79	8,527	121	5,313
Crawford	133	8	115	6,649	95	20
Cumberland	51	9	103	4,965	71	10

	Total personal income			Per capita income		Population (thousands)
	Dollars (millions)	Percent change 1976-77	Percent change 1969-77	Dollars	Percent of national average	
De Kalb	444	10	86	6,152	88	72
De Witt	130	13	122	7,802	111	16
Douglas	156	12	138	8,116	116	19
Du Page	5,553	11	127	9,659	137	574
Edgar	155	11	108	7,136	102	21
Edwards	53	10	182	6,970	99	7
Effingham	186	10	172	6,397	91	29
Fayette	109	11	109	5,250	75	20
Ford	130	10	104	8,775	125	14
Franklin	254	11	138	6,072	86	41
Fulton	302	9	125	7,051	100	42
Gallatin	43	12	123	5,778	82	7
Greene	91	14	81	5,501	78	16
Grundy	224	10	110	7,849	112	28
Hamilton	47	13	138	5,424	77	8
Hancock	142	12	105	6,110	87	23
Hardin	25	6	153	5,137	73	5
Henderson	48	16	81	5,724	81	8
Henry	413	10	114	7,321	104	56
Iroquois	248	13	108	7,431	106	33
Jackson	324	8	127	5,849	83	55
Jasper	68	13	141	6,107	87	11
Jefferson	213	10	144	5,992	85	35
Jersey	113	8	101	5,766	82	19
Jo Daviess	119	9	97	5,282	75	22
Johnson	36	5	132	3,919	56	9
Kane	2,139	9	111	7,873	112	271
Kankakee	675	9	90	7,040	100	96
Kendall	258	13	120	7,910	113	32
Knox	447	9	109	7,378	105	60
Lake	3,625	9	94	8,674	123	417
La Salle	803	9	91	7,382	105	108
Lawrence	111	9	113	6,276	89	17
Lee	245	10	88	6,872	98	35
Livingston	309	10	110	7,524	107	41
Logan	240	9	109	7,988	114	30
McDonough	200	11	116	5,057	72	39
McHenry	1,027	12	119	7,711	110	133
McLean	819	10	119	6,889	98	119
Macon	979	9	103	7,664	109	127
Macoupin	300	11	116	6,472	92	46
Madison	1,815	9	89	7,362	105	246

Personal Income 1977 (continued)

	Total personal income			Per capita income		Population (thousands)
	Dollars (millions)	Percent change		Dollars	Percent of national average	
		1976-77	1969-77			
Marion	262	9	118	6,357	90	41
Marshall	92	10	93	6,817	97	13
Mason	132	12	129	6,871	98	19
Massac	74	8	118	5,132	73	14
Menard	83	11	126	7,531	107	11
Mercer	113	12	114	6,297	90	18
Monroe	137	9	109	7,326	104	18
Montgomery	215	11	123	7,010	100	30
Morgan	271	10	109	7,757	110	35
Moultrie	98	11	108	7,040	100	14
Ogle	281	10	82	6,615	94	42
Peoria	1,693	9	117	8,373	119	202
Perry	146	9	137	7,052	100	20
Piatt	132	12	111	8,156	116	16
Pike	101	4	82	5,312	76	19
Pope	15	1	124	3,460	49	4
Pulaski	42	8	131	4,781	68	8
Putnam	36	11	108	6,401	91	5
Randolph	207	9	123	6,093	87	34
Richland	104	9	128	6,011	86	17
Rock Island	1,340	11	103	8,139	116	164
St. Clair	1,763	9	92	6,248	89	282
Saline	161	8	123	5,988	85	27
Sangamon	1,380	8	111	7,880	112	175
Schuyler	44	12	87	5,564	79	8
Scott	49	10	135	8,255	117	6
Shelby	139	13	93	6,041	86	23
Stark	54	13	102	7,454	106	7
Stephenson	334	9	81	7,161	102	46
Tazewell	1,017	9	125	7,900	112	128
Union	104	7	109	6,311	90	16
Vermilion	699	9	106	7,122	101	98
Wabash	95	13	143	6,917	98	13
Warren	156	14	105	7,452	106	21
Washington	90	12	125	5,971	85	15
Wayne	103	12	125	5,902	84	17
White	111	12	111	6,578	94	16
Whiteside	454	10	98	7,117	101	63
Will	2,145	9	118	7,014	100	305
Williamson	327	9	128	6,229	89	52
Winnebago	1,825	10	87	7,567	108	241
Woodford	226	12	125	7,298	104	31

The Illinois Coal Industry in Transition — A Bright Future?

ROSS KOPLIN

At present the Illinois coal industry is characterized by excess supply, falling spot market prices, and declining production levels. The industry is in an 8-year slump which has been further aggravated now by a short-term downward fluctuation in demand largely seasonal in nature. The situation has been worsened by the difficulty in transporting mined coal because of a relatively severe midwestern winter, and a national shortage of coal-carrying railroad cars.

Most Illinois coal is marketed through long-term contract and the future of the industry is dependent on the number of these contracts which will be renewed and whether additional markets can be found. An analysis of projected future national and regional demand indicates that this downturn in Illinois coal output will not carry through to the next decade.

General Background

Illinois is a major producer and net exporter of coal to the midwestern and southeastern regions of the country. The State has reported bituminous coal resources of between 30 and 40 billion recoverable tons, about 25 percent of the national total. These reserves exist in relatively thick seams at shallow depths. The coal has a high Btu content per ton and a natural proximity to major consumers, factors which combine to render favorable competitive conditions for mining and marketing.

Coal extraction is a major industry in Illinois, employing approximately 17,000 persons with a payroll of about $350 million. The estimated total value of coal produced approached $1 billion in 1977. Out of a total production in 1976 of 58.2 million tons, 25.4 million were used in the State and 32.8 million were exported.

Despite its favorable position as a coal supplier, total production in Illinois has declined steadily since 1970; in 1970 it was 64.9 million tons and by 1977 it was only 53.9 million tons (see the chart). As of the first quarter of 1979, the industry is still suffering declining production and relatively slack demand. Most Illinois coal is consumed by electric power plants and the single most significant factor in the production declines has been the ramification of environmental regulations to curtail the emission of sulfur dioxide from coal-fired generating facilities.

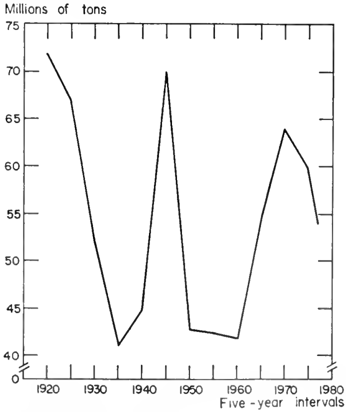
Slack Demand in the 1970s

Illinois coal contains a relatively high sulfur content ranging from 3 to 5 percent. When this coal is burned, as in an electric utility, it combines with oxygen, releasing sulfur dioxide (SO_2) in the flue gases. Sulfur dioxide in the atmosphere is an irritant to the lungs and upper respiratory tract, an acknowledged health hazard.

In an effort to curtail increasing environmental pollution, Congress passed the Federal Clean Air Act of 1970, part of which provided for the limitation of SO_2 emissions from stationary sources, many of which are electric generating plants. Regulations were established in two parts, applying to those plants to be constructed in the future, and to those already in existence. New Source Performance Standards (NSPS) applied to all steam-generating units of capacity greater than 250 million Btu heat input per hour if their construction or modification began after 17 August 1971. Individual states were given responsibility for devising a state implementation plan (SIP) for the regulation of all plants constructed before this date, with final approval coming from the federal government.

The New Source Performance Standards mandated that the newly constructed electric utilities could not exceed an emission ceiling of 1.2 pounds SO_2 per million Btus of heat input. State implementation plans have adopted less stringent ceilings which are largely contingent on the existing environmental quality of the region

Illinois Annual Coal Production



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in which the plant is situated. (In Illinois they are 1.8 pounds SO_2 per million Btus for plants located in one of three urban air quality maintenance regions, and 6.8 pounds SO_2 per million Btus everywhere else.) According to EPA data, the combined force of all regulations has been to reduce effectively SO_2 concentrations in urban areas an average of 30 percent from 1970 through 1975.

Over the last 8 years the difficulty for Illinois coal has come mainly from the imposed standards for curtailing the release of sulfur dioxide mandated by the state implementation plans on existing sources of pollution. To conform to regulations electric utilities in the midwest could either (1) use flue gas desulfurizers (scrubbers) to cleanse the stack gases of sulfur dioxide, or (2) switch from the use of locally supplied high-sulfur coal to that with a naturally occurring sulfur content small enough to emit sulfur dioxide conforming with standards. Because of the immature nature of scrubber technology, and its high capital cost (estimated at approximately $80 million for an average-size, 800-megawatt generation station), many utilities chose to switch to the use of lower-sulfur coal, delivered mainly from western states. Much of this coal from west of the Mississippi River has a sulfur content of less than 1 percent, but its delivered price per ton to the Midwest is far in excess of, and its heating value lower than, that produced locally.

Because approximately 85 percent of total Illinois production is used by electric utilities, this switching and consequent influx of western coal to the Midwest has significantly slackened demand for Illinois and other midwestern coal in the last 8 years. During 1970 29.5 million tons were used by Illinois utilities, of which 28.4 came from the Midwest. By 1976 coal usage by Illinois utilities had increased to 35 million tons, of which now only 23.3 million tons was mined in the Midwest. By the mid-1970s, western coal was approximately 41 percent of that burned in Iowa, 33 percent in Illinois, 26 percent in Wisconsin, and 14 percent in Indiana. As the coal must be shipped farther east it becomes relatively more expensive in comparison with alternative methods of SO_2 restriction, and hence has made greater inroads in the western sections of the Midwest region.

Table 1. New Coal-Fired Powerplants Between 1978-81

Utility	Plant	Unit no.	Capacity (MW)	Planned scrubbers	Planned coal sources	Year on-line
Georgia						
Georgia Power Company	Wansley	2	896	No	IL, IN, KY (East)	1978
Illinois						
Central Illinois	Newton	1	550	Yes	IL	1978
Public Service	Newton	2	550	Yes	IL	1981
Indiana						
Public Service	Gibson	2	650	Yes	IL	1978
Company of Indiana	Gibson	3	650	Yes	IL	1979
Hoosier Energy	Merom	1	490	Yes	Unknown	1981
Division	Merom	2	490	Yes	Unknown	1981
Missouri						
Board of Municipal Utilities	Sikeston	1	235	Yes	IL	1981

Source: Based in part upon US Department of Energy, Federal Energy Regulatory Commission, "Status of Coal Supply Contracts for New Generating Electric Units," May 1978, and other data sources.

Projected Short-Term Steadying in Demand

For the short-term future (1–3 years) the demand for Illinois coal production should stabilize as a result of nearly all of the older power plants having come into compliance with SIP regulations. Only a limited number of existing utilities in the Midwest may still come into conformity by switching to lower-sulfur coal. For those that do not, stringent noncompliance penalties will be imposed after 7 August 1979.

For example, in the state of Indiana there are three generating plants that are either not in compliance or on an approved compliance schedule, out of a total of 29 in the state. In Wisconsin only one utility in the state is not in compliance out of a total of 26. And in Illinois only one utility is actually in violation and not on an approved compliance schedule, out of 48 in the State. This pattern is similar in other states of the Midwest, where most Illinois coal is consumed. The state of Ohio has been the least timely of all in the devising and enforcement of an approved state implementation plan. Fully 21 plants are still in violation and not on approved compliance schedules, out of 52 in the state. Ohio utilities, however, are closer to eastern coal sources and generally do not use coal produced in Illinois.

There are a few power plants in the Midwest which use Illinois coal and may still conceivably switch to western coal; however, most of the damage that could be done to the Illinois coal market by these older midwestern utilities switching to nonlocal coal has, for the most part, already taken place. This major factor in the continuous slackening of demand over the previous eight years will soon cease to exist.

Stronger Future Demand

In the longer term, the demand for Illinois coal will be contingent upon the overall growth of demand for coal in the United States. This, in turn, should depend largely on the growth in electricity consumption, which according to estimates will be approximately 4.5 percent per year at least through 1985, and on the construction of coal-fired generators to meet this increased demand.

Table 2. Projected National Electric Generating Capacity Under Alternative New Source Performance Standards (net GW)

	1975 actual	1990 Current NSPS	1990 Revised (full control) NSPS
Nuclear	38.3	176.7	176.7
Coal	183.6	465.0	444.6
Oil/gas	192.1	301.4	323.6
Hydro and others	66.3	87.6	86.4
Total	480.3	1,030.7	1,031.3
Coal as a percent of total	38.2	45	43.1

Source: ICF Incorporated energy use analysis.

Utilities in the US have reported plans to bring approximately 255 new coal-using generating units on line by 1987, which will require an additional 440 million tons of coal yearly. There are several utilities coming on line between 1978 and 1981 which are committed to using Illinois-supplied coal. Most Illinois coal has in the past been sold in the Midwest, but new markets are being exploited, particularly in the rapidly growing southeast section of the country (see Table 1).

In the foreseeable future almost all new electric power plants will either use coal or be nuclear-powered. The present 39 percent of total generating capacity fired by relatively expensive oil and natural gas is expected to diminish comparatively with the present 38 percent which is coal-fired and the 9 percent which is nuclear-powered. A rapidly rising price of oil should accentuate this projected trend. Nuclear power will be a definite competitor to coal-fired units, but the near future is clouded by safety considerations. Coal, therefore, will be increasingly used for generating electric power, the demand for which is expected to grow over time (see Table 2).

The relative competitive position of Illinois coal in this generally strong projected market will be enhanced by proposed revisions to the NSPS. These modifications are pursuant to the Clean Air Act Amendments of 1977, which contains a provision that standards for electric utilities must "reflect . . . the percentage reduction achievable through application of the best technological system of continuous emission reduction which . . . the [EPA] Administrator determines has been adequately demonstrated" (Section III (a) (1) (C). The proposed version of the standard would require electric utilities not only to conform to an absolute emission ceiling of 1.2 pounds of SO_2 per million Btu, but also all new plants must have flue gas desulfurizers (now deemed by the administrator to be the "best technological system"), or some other technology, which will reduce SO_2 emissions by a proposed 85 percent. Most Illinois coal, subjected to the mandatory scrubbing process, will conform to the absolute ceiling level of emissions.

Only if total SO_2 discharges are under a floor of .2 of a pound per million Btu will power plants not need to use flue gas desulfurizers. Most western-produced coal will not fall under this stringent emission floor when combusted, necessitating the use of flue gas desulfurizers in the burning of this low-sulfur coal. Near full scrubbing equipment required, regardless of the type of coal used, will effectively dissipate the present economic advantage of using lower-sulfur western coal, and it is predicted that Illinois will regain its former market share.

The exact nature of the revised NSPS are not scheduled to be final until 1 June 1979. At this point evidence suggests that the final policy may be to lower somewhat the maximum emission ceiling from the 1.2 pounds initially proposed, and possibly allow for less than full (85 percent) scrubbing when lower-sulfur coal is used. Either of these changes will make the final regulations slightly less favorable to Illinois; however, the total effect of the revised NSPS will still be to strengthen considerably the demand for Illinois coal.

Table 3. Projected Coal Production in 1990 Under Current and Revised New Source Performance Standards

	1975 actual	Current standards	Revised (full control) standards
US coal production (million tons)			
East	396	419	399
Midwest	151	348	390
West	100	674	646
Total	647	1,441	1,435
Western coal shipped East (million tons)	21	84	62

Source: EPA analyses completed in November 1978.

Rather extensive economic analysis has been made to model the future interregional flows of coal under various regulation scenarios. In December 1978, the USEPA projected that midwestern coal production will rise from the 1975 level of 151 million tons to 348 million tons in 1990, if current standards remain in force (see Table 3). Under the revised NSPS, however, coal production in the Midwest would reach a higher 390 million tons by 1990. The amount of western coal shipped east of the Mississippi River would rise from a 1975 level of 20.8 million tons to 84 million tons by 1990 under current provisions. With the revised standards, the change will be a less dramatic rise to 62 million tons. An exhaustive analysis conducted by Argonne National Laboratory has yielded similar results. Exact estimates may prove to be imprecise because of the great number of variable factors; however, the general implications of these studies are positive for the future of the Illinois coal market.

An examination of the recent actions and future plans of the major Illinois coal companies provides additional evidence of the healthy long-term demand for Illinois coal. Many have embarked on expanding existing mines and opening new facilities. An official of Monterey Coal Company has recently stated that operations at their No. 2 mine are being expanded to achieve greater capacity by 1981. MAPCO Inc. has recently announced plans to open a large new mine in White County. Other companies have actively engaged in purchasing Illinois reserves. These companies make current expansion plans on the basis of their prediction of what the long-term market will be for their coal.

The Industry in Perspective

In perspective, the yearly production of Illinois coal has fluctuated considerably over 5-to-10 year periods since the early 1920s. The current 8-year downturn in output of coal can be considered an aberration in the otherwise growing demand after 1960. This break in production growth can be largely attributed to emission regulations applied in 1970 to new and old electric utilities. Even with the production declines over the past 8 years, the economic effect on Illinois coal-mining regions has been minimal, as total mine employment has actually risen from 1970 through 1978. This reflects declining

(continued on next page)

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Illinois Economic Indicators

Our two indicators scored small gains in February as several components increased. After a slight decline in January, both building permits for residential housing and average weekly hours in manufacturing rose on a seasonally adjusted basis. Weekly earnings in manufacturing took a jump in February after taking inflation into consideration. Employment in manufacturing also increased slightly in the same month. Data for retail sales and layoff rate were not available at press time. Although most series recorded increases, the increases were just large enough to recover from the decline in January. Since mid-1977 the leading indicator shows a weakening in the growth the State has enjoyed in the last three years.

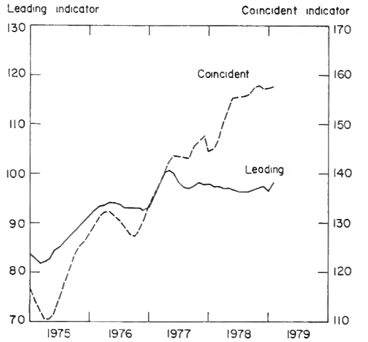
Illinois Business Indexes

Item	Jan. 1979	Dec. 1978	Jan. 1978
Leading indicator (1969=100)	[illegible][a,b]	96.5[a,b]	[illegible]
Coincident indicator (1969=100)	157.[illegible][a,b]	157.2[a,b]	[illegible]
Employment-manufacturing (in thousands)[1]	[illegible][a]	[illegible]	[illegible]
Weekly earnings-manufacturing[1]	$2[illegible]3.4[a]	$285.3	$261.1
Consumer prices in Chicago (1967=100)[2]	199.6	[illegible]	182.
Ordinary life insurance sales (in millions)[3]	$1,[illegible]	[illegible]	$9[illegible].8
Retail sales (in millions)[4]	$3,131[a]	[illegible]	$2,929
Farm prices (1967=100)[5]	238[a]	[illegible]	[illegible]
Coal production (in thousands)[6]	[illegible]	[illegible],580.6	[illegible]
Petroleum production (in thousands)[7]	1,688	1,884	1,[illegible]49
Building permits (in thousands)[4]			
Residential housing units	1.[illegible]	[illegible]	2.1
Value of residential housing	$4[illegible],366	[illegible]	[illegible]
Value of nonresidential housing			
Industrial buildings	$12,2[illegible]	$25,398	$9,[illegible]
[illegible], and professional buildings	$21,[illegible]	$11,[illegible]	$5,[illegible]
[illegible] buildings	$8,[illegible]	$1[illegible],[illegible]42	$6,[illegible]
Other	$[illegible]	[illegible]	$1[illegible]
	1978 II	[illegible]	[illegible]
Personal income (in millions)	$93,690	$90,830	$84,576

[1]Ill. Dept. of Labor. [2]U.S. Bureau of Labor Statistics. [3]Life Ins. Agcy. Manag. Assn. [4]U.S. Dept. of Commerce. [5]Ill. Crop Rpts. [6]Ill. Dept. of Mines. [7]Ill. Geol. Survey.

[a]Preliminary. [b]February 1979 compared with January 1979 and February 1978.

Illinois Economic Indicators



Bureau of Economic and Business Research

COAL—(continued from page 11)

productivity per worker over this period, requiring more workers to produce less coal.

The immediate future of the Illinois coal industry will depend heavily on month-by-month fluctuations in demand. It is possible that over the next year the situation of weak demand may get worse before it improves. However, the previous trend of midwestern utilities switching from the use of locally supplied coal to conform with state implementation plans has been nearly completed, and this should result in steadier demand during the next one to three years. Revised NSPS provide an even brighter long-term future for Illinois coal in an increasingly strong national market. In addition, evidence indicates that Illinois coal operators will continue to penetrate new regional markets outside the Midwest. These major factors should provide for a healthy, and possibly robust, coal industry in Illinois in the next 10 to 20 years.

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A Perspective on the Multinational Firm

JOHN L. BUNGUM

Over the past three decades the multinational corporation (MNC) has received considerable attention in the academic and popular presses; in recent years the literature has been of a decidedly negative nature, appearing at times to be rather unobjective and frequently presenting strident demands for extensive control of MNC operations.

In this brief article, I shall present a different perspective on the MNC — one that hopefully will provide a more objective framework with which to view the MNC and one that will identify why the MNC is frequently criticized. Organizationally, I shall initially look at the development of the MNC and the potential benefits — which incidentally must be fairly substantial, for otherwise a nation would *not* let a MNC establish a productive facility within its territory. Second, I shall explain why there has been growing hostility toward the MNC in the last decade or so. These remarks will focus on the costs of MNC activity. I shall close with some very broad, general remarks on the nature of economics.

John L. Bungum is an assistant professor of economics at the University of Wisconsin–Platteville. In the past several years he has presented and/or discussed papers at the annual conventions of the American Economic Association, the Western Economic Association, the Midwest Economic Association, the Missouri Valley Economic Association, and the Mid-South Academy of Economists, and has published a book review and four articles in respected academic journals. His primary research interests are the state of economic science and the sociology of the economics profession, although he occasionally focuses on problems in international economics and macroeconomics as well. Dr. Bungum holds degrees from Luther College, the University of Iowa, and the University of Nebraska.

Before discussing the development of MNCs, we should recognize that they are not uncomplicated institutions. We tend to think of them as big US firms operating plants abroad, who exploit cheap foreign workers and resources, especially in poor countries.

This is misleading for a variety of reasons. First, for many decades companies headquartered in other countries, especially British companies, have set up production facilities abroad. Second, much of the investment of US MNCs is in Europe, where labor and other resources are anything but cheap. Third, foreign firms are more and more becoming MNCs. As is well known, Volkswagen recently set up a plant in Pennsylvania. Volvo did the same several years ago in Virginia, and foreign companies are buying considerable amounts of agricultural land in this country. Finally, some of the socialist bloc countries are engaging in multinational production activities. So the nature of multinational economic activity is complex and changing and we must be cognizant of this complexity when attempting to deal with the resultant difficulties. What is appropriate for MNCs in Indonesia may not be suitable for a MNC operating in the US or France.

Development of MNCs Since 1950

Looking at the recent activities of multinational corporations, two periods are identifiable. The first is the "honeymoon" period, which spans the years approximately from 1950 to the middle 1960s. The second is the mid-1960s to the present which some have called the "counting-the-costs" period.

The Honeymoon Period — The Benefits

In the honeymoon period, most attention was given to the benefits accruing to the recipient or host country. In Western Europe, production by US firms was heralded in this period because European economies truly needed help. Their economic structures had for the most part been devastated by the war. They needed US capital,

Regulation of the Financial Industry in Illinois *By C. S. Cheung / Page 11*

US knowledge, and US organizational talent to rebuild their economies. American firms were welcomed. In Canada and Australia, US investment was desired in order to develop their natural resources. In the less developed countries (LCDs), which were becoming aware of the economic potential of their resources, especially the mineral resources, foreign companies were sought to provide the necessary capital and organizational skills needed to exploit this potential.

During this period, from 1950 to the mid-1960s, the differences in technology and managerial skills between the US and the rest of the world were at their maximum level; and countries adopted very generous policies towards MNCs to encourage them to locate production facilities within their boundaries. In fact, countries competed with each other in attempting to woo MNCs to their lands. For the most part only the benefits were considered, and these benefits included new skills, knowledge, and organizational abilities being brought into the economy, more employment opportunities for local residents, and, of course, higher incomes and the potential for higher tax revenues, among others. The associated economic, political, and psychological costs, which will be discussed later, were rarely identified.

By the mid-1960s, attitudes toward the MNC began to change in most parts of the world, including the United States. The costs, which were slighted in the honeymoon period, became more prominent; and it may be, too, that the benefits to the host country decreased as time passed. As a consequence, pressures for controlling multinational activity arose in most countries and at the United Nations, where a study group was established and a report issued in 1974.

Sources of Hostility — The Costs

Why the growing hostility toward the MNC? MNCs are big and important — at least 20 percent of the free world's industrial output is produced by them. Further, in many economies the MNCs have increased their relative importance and in some sectors of these economies they completely dominate. Bigness usually generates hostility, especially so if foreign, and the MNCs are no exception.

In the arena of politics, bigness is a very special problem. Governments, increasingly I believe, like to have power, particularly power to control their economies, and if MNCs are significant in an economy, there is a large element over which local political leaders do not have complete control. A related fact is that a MNC can in many cases move its production facilities to another country if one government becomes too "oppressive." Without a doubt, this has frustrated politicians the world over, and most significantly in countries having some type of central planning. It is known, too, that some MNCs, in the process of selecting a location for a new plant will play one government against another in order to obtain the best arrangements. Political leaders are not exactly enamored with this process.

Taxes are another problem. Typically, most host countries feel they do not receive an adequate tax return from MNCs, at least compared with what was expected when the firm set up production. Likewise many parent countries, that is, those where the company headquarters are located, feel they are not receiving appropriate taxes on the profits earned abroad. A variety of consequences follow, including the development of pressures within the host country and parent country for higher taxes on MNC profits, and then a clash between the host and parent country governments on how to handle taxation of MNC profits.

Another example of how the MNCs have brought governments in conflict with one another is when the parent country government has attempted to regulate what the MNC does in another country. Host country governments find this particularly distasteful — they think of it as a violation of their sovereignty. A simple illustrative case: the US government controls the sale of US merchandise to the Soviet Union. Let us say the US government has denied the sale of computer equipment to the Soviet Union. So now the Soviet Union goes to a French subsidiary of an American company and makes a deal, and the French government does not object. The question is, should the US government be able to prevent this sale? It is an obvious case of overlapping jurisdiction. The key point is that the governments of the two countries are in conflict, and no matter what the MNC does, it is going to make one government unhappy.

Ideological differences certainly play a role, too, in the growing hostility towards the MNC. Given the political developments in many of the poorer countries in the world, that is, those developments of a revolutionary, socialist nature, one would naturally expect growing hostility to the MNC which frequently is considered an agent for capitalist exploitation. Of a similar nature is the search for identity of most of the newly formed nations, socialist and nonsocialist. MNCs are prominent and distinctive reminders of their colonial past.

General cultural differences need to be recognized also. There is little reason to expect that relations between business and government in this country should be the same as they are abroad. Significant differences exist and they can be a source of hostility. In the United States, for example, there is considerable individual executive decision-making; in Japan, the emphasis is on obtaining a consensus — that is, group decision-mak-

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ing. It is obviously easy for hostility to arise because of this difference. Another example: US business regulation has tended to be "hands off," at least until recently. By this I mean that regulation is fairly general and applies equally to all firms, that is, it is nondiscriminatory. In other countries, regulation takes a more specific and discriminatory form. Special rules may be established for foreign firms or perhaps for different sectors of the economy. US business executives find themselves uneasy in this situation and it naturally creates hostility.

We must remember, as well, that as an economy develops, some groups gain relative power while other groups lose. Typically, of course, the most vocal groups are the losers and the MNCs are a readily available scapegoat. Some writers have commented that MNCs "can't win in the politically charged atmosphere of the late 1960s and early 1970s." Regardless of what they do, they will be criticized.

As a final source of hostility, let us recognize the attitudinal change of organized labor in this country to foreign investment by US firms. Until the middle-to-late 1960s, organized labor's attitude was relatively positive; but now it is distinctly negative, since the feeling exists that it causes a loss of jobs for Americans. To be sure, foreign investment causes US workers to change some jobs, but it is much less certain that it actually causes a *net* loss of jobs.

To summarize, the sources of growing hostility are simple bigness, political problems deriving from MNC flexibility and choice, tax-related problems, ideological differences, cultural differences, and attitudinal changes by groups adversely affected by MNCs.

Some Concluding Thoughts

In conclusion, some broad, general comments about the fundamental nature of economics and the relationship of economics to anti-MNC political activity can be made. I suppose these remarks will reflect my training as an economist, but they are ideas which I think should be kept in mind.

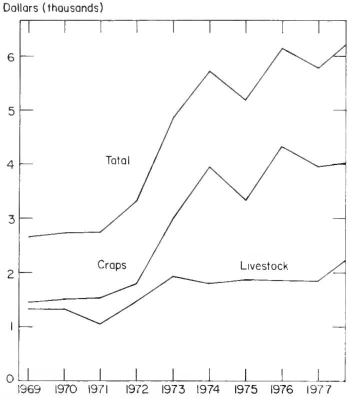
There is a popular expression in economics, "There's no free lunch." In the context of multinational economic activity, its obvious meaning from the foregoing is that there are *both* benefits *and* costs to MNC activity; and if a country wants the benefits, it must be willing to accept the costs. To some extent the costs may be reduced or controlled but still, the benefits do *not* come free.

In the long run, countries must develop their own economies, and perhaps the current dislike of MNCs throughout the world, especially in the LDCs, will force upon these nations an awareness that they must do the job of developing their economies themselves. A friend from Kuwait once said to me, "the best thing the US can do is not to give us any aid; then we will start doing things ourselves." That seems to be a bit harsh, but it is probably fairly close to the truth. Developing a country economically is not easy; in fact, for all developed societies it has been quite painful because traditional ways must change and resistance to changing traditional ways is always very strong, especially in agriculturally oriented societies. Further, in most countries the transition to the new ways has not been very smooth.

We must remember that most of the MNC problems are political and psychological in nature, and that for most of the world, except the industrialized world, the real problem is *economic* in nature. Simply put, it is that not enough goods and services are being produced to generate a high standard of living for most of the people of this world. To be sure, it is exciting to be opposed to MNCs and to engage in activities leading to their expulsion and/or regulation; but, per se, that contributes very little to resolving the real economic problems of most societies — especially of the underdeveloped ones. Expanding the output of goods and services is still the world's most fundamental problem.

Illinois Economic Trends

Cash Receipts from Farm Marketing in Illinois



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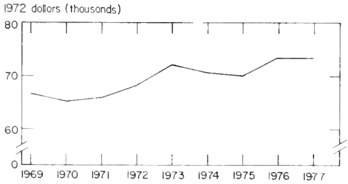
Real Gross State Product, Illinois



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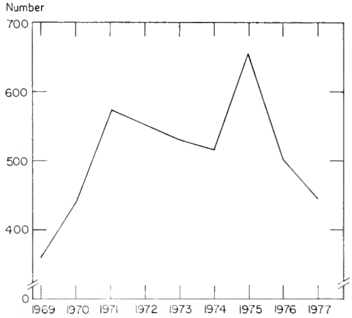
1977 Income and Employment Data Available

Detailed BEA income and employment data are available for each of the 102 counties and 10 SMSAs of Illinois for 1971 through 1977. Those interested in obtaining the data may write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801. A charge will be made to cover costs.

Illinois Business Failures



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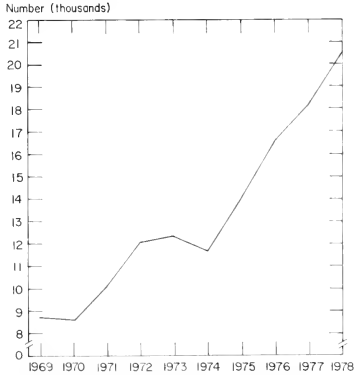
Illinois New Business Incorporations



Bureau of Economic and Business Research

Comparative Economic Data for Selected Illinois Cities, March 1979

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[5] (percent)
ILLINOIS		$ 129,146[a]	3,673.7[a]	$55,862[a]	4,934	6.0
Percentage change from	Feb. 1979	+56.6	-3.3	+13.3		
	Mar. 1978	+135.1	+1.8	+21.0		
NORTHERN ILLINOIS						
Chicago		$ 85,302	1,772.9	$44,187	1,478.6	6.7
Percentage change from	Feb. 1979	+46.8	-2.4	+16.8		
	Mar. 1978	+323.2	-2.3	+22.9		
Aurora		$ 2,196	132.7	$ 613	37.1	5.7
Percentage change from	Feb. 1979	+97.1	-13.3	+6.2		
	Mar. 1978	+1.1	-10.6	+13.7		
Elgin		$ 1,506	106.1	$ 719	27.1	[illegible]
Percentage change from	Feb. 1979	+79.0	+0.6	+3.1		
	Mar. 1978	-22.4	+12.9	+16.1		
Joliet		$ 1,267	443.5	$ 343	45.4	6.2
Percentage change from	Feb. 1979	-18.9	+0.8	-8.2		
	Mar. 1978	-28.3	+8.6	+10.6		
Kankakee		$ 533	86.1[b]	$ 209	13.2	8.7
Percentage change from	Feb. 1979	+204.5	+0.3	-7.1		
	Mar. 1978	+461.0	+10.1	+13.5		
Rock Island-Moline		$ 2,376	125.9[c]	$ 1,468	n.a.	n.a.
Percentage change from	Feb. 1979	-14.7	-1.3	+5.9		
	Mar. 1978	-61.5	+8.4	+27.5		
Rockford		$ 4,048	172.9	$ 921	69.7	5.8
Percentage change from	Feb. 1979	+72.8	-4.8	-8.0		
	Mar. 1978	+27.1	+6.2	+0.6		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 2,097	51.0	$ 1,018	n.a.	n.a.
Percentage change from	Feb. 1979	-11.9	+0.3	+9.6		
	Mar. 1978	-43.4	+16.4	+22.2		
Champaign-Urbana		$ 1,406	50.4	$ 721	n.a.	n.a.
Percentage change from	Feb. 1979	+336.6	-3.4	+1.4		
	Mar. 1978	-7.3	+5.0	+5.2		
Danville		$ 518	45.9	$ 218	18.0	4.8
Percentage change from	Feb. 1979	+146.6	-7.8	-12.8		
	Mar. 1978	-15.3	+5.7	+7.9		
Decatur		$ 1,491	124.1	$ 530	40.2	7.1
Percentage change from	Feb. 1979	-82.1	-6.6	-0.7		
	Mar. 1978	-48.0	+8.1	+16.9		
Galesburg		$ 1,198	31.8[b]	$ 151	14.9	[illegible]
Percentage change from	Feb. 1979	+327.8	-6.1	-4.4		
	Mar. 1978	+34.4	-0.6	+4.8		
Peoria		$ 7,953	206.8	$ 1,591	59.4	6.8
Percentage change from	Feb. 1979	+1,250.2	-7.0	+10.2		
	Mar. 1978	+137.7	+5.7	+25.1		
Quincy		$ 521	40.7	$ 228	19.3	6.8
Percentage change from	Feb. 1979	+175.6	-17.[illegible]	-3.7		
	Mar. 1978	-20.3	+0.9	+15.1		
Springfield		$ 11,277	116.8	$ 1,996	48.0	[illegible]
Percentage change from	Feb. 1979	+8,500.4	-7.5	+0.4		
	Mar. 1978	+184.6	+10.9	+18.4		
SOUTHERN ILLINOIS						
East St. Louis		$ [illegible]	[illegible]	$ [illegible]	[illegible]	[illegible]
Percentage change from	Feb. 1979	[illegible]	-3.2	+3.2		
	Mar. 1978	[illegible]	-12.3	[illegible]		
Alton		$ 2,861	51.6	[illegible]	[illegible]	[illegible]
Percentage change from	Feb. 1979	+95.0	[illegible]	[illegible]		
	Mar. 1978	+162.0	[illegible]	[illegible]		
Belleville		$ 1,574	24.6	[illegible]	[illegible]	[illegible]
Percentage change from	Feb. 1979	+261.[illegible]	[illegible]	[illegible]		
	Mar. 1978	[illegible]	[illegible]	[illegible]		
Carbondale-Murphysboro		688	35.[illegible]	[illegible]	[illegible]	[illegible]
Percentage change from	Feb. 1979	[illegible]	[illegible]	[illegible]		
	Mar. 1978	[illegible]	[illegible]	[illegible]		

[1]Local sources; data include federal construction projects. [2]Local power companies. [illegible] period ending 23 March 1979. [4]Illinois Department of Labor, preliminary.

[a]Total for cities listed. [b]Includes [illegible] [illegible]

Employment By Type and Major Industrial Sources, Illinois SMSAs and Counties, 1977

	Total employment	Number of propri- etors	Wage and salary employment									
			Total	Farm	Nonfarm							
					Total	Government	Private nonfarm					
							Total	Manu- facturing	Trans. public util.	Trade	Services	Other[a]
United States	97,848,874	9,053,874	88,795,000	1,333,000	87,462,000	17,795,000	69,667,000	19,696,000	4,706,000	18,611,000	17,030,000	9,624,000
Illinois	5,179,961	428,130	4,751,831	39,500	4,712,331	798,359	3,913,972	1,221,689	275,184	1,042,146	884,968	489,985
SMSAs												
Bloomington-Normal	53,814	6,536	47,278	1,133	46,145	8,647	46,145	6,671	2,996	10,695	8,245	8,891
Champaign-Urbana	81,824	7,046	74,778	772	76,006	33,270	40,736	6,174	2,436	15,847	11,176	5,076
Chicago	627,998	629,119	3,339,589	6,758	3,165,843	452,861	2,712,982	826,777	193,638	727,998	629,119	335,450
Davenport-Rock Island-Moline	184,340	15,291	169,049	1,171	167,878	32,285	135,593	46,839	7,771	39,070	27,180	14,733
Decatur	62,764	5,083	57,681	439	57,242	6,860	50,382	18,642	4,401	11,333	0[b]	2,595
Kankakee	43,862	4,102	39,760	844	38,916	10,393	28,523	9,939	1,396	7,435	7,368	2,385
Peoria	174,165	13,879	160,286	1,279	159,007	20,741	138,266	50,838	7,005	34,841	28,942	16,640
Rockford	127,804	9,181	118,623	623	118,000	13,066	104,934	50,609	4,897	23,785	18,123	7,520
Springfield	99,280	9,032	90,248	1,167	89,081	27,968	61,113	8,481	0[b]	17,325	18,803	7,145
St. Louis	1,092,955	68,148	1,024,807	2,552	1,022,255	161,115	861,140	251,690	66,935	223,513	222,842	97,055
Counties												
Adams	34,210	4,821	29,389	417	28,972	3,754	25,218	8,381	1,410	4,844	0[b]	2,043
Alexander	5,007	783	4,224	109	4,115	751	3,364	1,326	343	845	0[b]	173
Bond	5,157	1,616	3,541	168	3,373	1,047	2,690	491	150	817	1,047	77
Boone	12,529	1,474	11,055	301	10,754	1,376	9,378	6,189	434	1,094	1,064	558
Brown	2,243	1,014	1,229	121	1,108	327	781	27	68	287	0[b]	85
Bureau	15,431	3,733	11,698	544	11,154	2,790	8,364	3,039	416	2,070	1,716	1,123
Calhoun	2,187	1,019	1,168	134	1,034	450	584	14	27	237	229	77
Carroll	7,649	2,156	5,493	283	5,210	1,884	3,326	732	646	917	711	312
Cass	5,829	1,294	4,535	225	4,310	999	3,311	1,223	0[b]	911	0[b]	277
Champaign	81,824	7,046	74,778	772	74,006	33,270	40,736	6,174	2,436	15,874	11,176	5,076
Christian	14,376	2,820	11,556	806	10,750	2,067	8,683	1,982	612	2,426	1,991	1,672
Clark	6,749	2,094	4,655	270	4,385	1,078	3,307	822	289	996	588	605
Clay	5,738	1,781	3,957	81	3,876	1,172	2,704	810	214	754	389	537
Clinton	10,226	2,353	7,873	263	7,610	2,443	5,167	891	428	1,235	1,532	647
Coles	22,722	2,960	19,762	321	19,441	4,673	14,768	5,097	1,411	3,911	2,746	1,596
Cook	2,687,991	116,686	2,571,305	1,419	2,569,886	339,770	2,230,116	672,851	168,077	591,128	518,444	279,616
Crawford	9,102	1,843	7,259	150	7,109	1,208	5,901	2,590	359	1,284	658	1,010
Cumberland	3,860	1,522	2,338	112	2,226	586	1,640	421	0[b]	485	0[b]	81
De Kalb	29,944	3,537	26,407	910	25,497	7,981	17,516	7,189	757	5,275	2,709	1,474
De Witt	6,562	1,604	4,958	207	4,751	1,162	3,589	822	558	1,296	0[b]	199
Douglas	8,984	1,775	7,229	337	6,892	1,232	5,660	1,584	533	1,501	0[b]	588
Du Page	217,950	16,864	201,086	1,049	200,037	24,873	175,164	39,196	9,268	58,252	44,876	22,662
Edgar	9,083	2,437	6,646	464	6,182	1,244	4,938	2,077	0[b]	1,261	942	354
Edwards	3,514	1,016	2,498	120	2,378	362	2,016	1,162	99	375	209	60

Employment By Type and Major Industrial Sources, Illinois SMSAs and Counties, 1977 (continued)

	Total employment	Number of propri- etors	Wage and salary employment									
			Total	Farm	Nonfarm							
					Total	Government	Private nonfarm					
							Total	Manu- facturing	Trans. public util.	Trade	Services	Other[a]
Effingham	15,310	2,821	12,489	215	12,274	1,812	10,462	3,405	689	3,085	2,354	929
Fayette	8,853	2,745	6,108	295	5,813	1,800	4,013	1,213	259	1,239	662	460
Ford	7,271	1,825	5,446	384	5,062	1,270	3,792	1,142	217	1,079	890	464
Franklin	12,159	2,593	9,566	122	9,444	2,395	7,049	521	450	1,624	1,510	2,937
Fulton	15,888	3,413	12,475	393	12,082	2,870	9,212	2,408	456	2,144	2,008	2,196
Gallatin	3,216	743	2,473	182	2,291	602	1,689	259	25	370	157	878
Greene	5,825	2,034	3,791	433	3,358	1,004	2,354	448	305	775	583	200
Grundy	12,021	1,720	10,301	179	10,122	1,576	8,546	2,890	1,130	2,606	960	811
Hamilton	2,962	1,347	1,615	134	1,481	605	876	210	73	305	162	119
Hancock	8,422	3,088	5,334	333	5,001	1,603	3,398	547	289	994	1,054	467
Hardin	1,767	414	1,353	14	1,339	367	972	12	0[b]	107	220	523
Henderson	2,492	1,004	1,488	283	1,205	606	599	14	52	256	142	135
Henry	20,200	4,592	15,608	571	15,037	3,276	11,761	2,880	900	3,198	2,119	1,808
Iroquois	13,853	4,120	9,733	860	8,873	2,040	6,833	2,333	268	2,100	1,447	685
Jackson	26,741	2,627	24,114	349	23,765	10,588	13,177	1,688	1,132	4,885	3,629	1,843
Jasper	5,205	1,821	3,384	148	3,236	640	2,596	602	99	599	0[b]	91
Jefferson	16,058	2,915	13,143	153	12,990	2,141	10,849	1,451	724	2,858	2,608	3,208
Jersey	5,485	1,432	4,053	275	3,778	1,306	2,472	358	174	897	818	225
Jo Daviess	8,136	2,514	5,622	287	5,335	1,285	4,050	1,768	202	1,009	641	395
Johnson	2,494	990	1,504	96	1,408	619	789	116	0[b]	353	103	87
Kane	119,894	8,263	111,631	1,176	110,455	18,664	91,791	35,220	3,548	23,568	20,773	8,124
Kankakee	43,862	4,102	39,760	844	38,916	10,393	28,523	9,939	1,396	7,435	7,368	2,385
Kendall	15,306	1,577	13,729	373	13,356	1,464	11,892	8,831	195	1,225	1,212	369
Knox	31,170	3,664	27,506	546	26,960	5,348	21,612	8,789	1,894	5,389	3,679	1,541
Lake	179,860	12,006	167,854	1,195	166,659	49,665	116,994	42,600	4,320	31,558	26,015	12,501
La Salle	49,192	7,320	41,872	806	41,066	5,783	35,283	14,519	2,253	9,039	6,232	3,240
Lawrence	6,434	1,288	5,146	178	4,968	1,076	3,892	842	183	849	951	1,065
Lee	16,293	2,911	13,382	288	13,094	5,194	7,900	2,407	662	2,099	1,955	777
Livingston	17,138	3,993	13,145	584	12,561	3,658	8,903	2,556	445	2,427	2,116	1,359
Logan	16,025	2,562	13,463	510	12,953	4,378	8,575	2,518	490	2,249	2,557	752
McDonough	14,938	2,942	11,996	353	11,643	3,650	7,993	2,185	393	3,189	1,487	739
McHenry	46,381	5,827	40,554	1,352	39,202	5,336	33,866	15,557	1,180	7,330	5,910	3,889
McLean	53,814	6,536	47,270	1,133	46,145	8,647	37,498	6,671	2,996	10,695	8,245	8,891
Macon	62,764	5,083	57,681	439	57,242	6,860	50,382	18,642	4,401	11,333	0[b]	2,595
Macoupin	15,499	4,180	11,319	530	10,789	2,774	8,015	995	602	2,427	0[b]	1,001
Madison	93,207	8,170	85,037	562	84,475	13,556	70,919	28,975	5,026	15,220	14,993	6,705
Marion	17,945	3,284	14,661	153	14,508	2,663	11,845	3,187	1,316	3,051	2,686	1,605
Marshall	4,721	1,393	3,328	188	3,140	737	2,403	721	139	798	0[b]	301
Mason	6,705	1,728	4,977	425	4,552	1,342	3,210	861	219	1,193	481	388
Massac	5,073	1,139	3,934	71	3,863	1,057	2,806	956	564	552	531	195
Menard	3,673	1,175	2,498	304	2,194	792	1,402	256	161	444	321	211
Mercer	5,637	2,117	3,520	402	3,118	1,404	1,714	140	199	750	367	1,307

[illegible] and Major Industrial Sources, Illinois SMSAs and Counties, 1977 (continued)

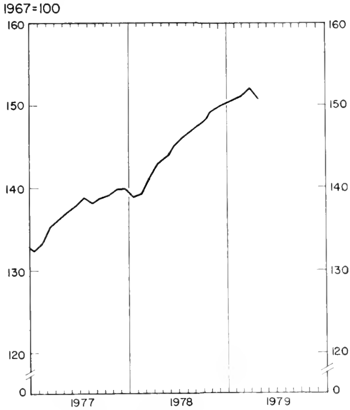
	Total employment	Number of proprietors	Wage and salary employment: Total	Farm	Nonfarm: Total	Government	Private nonfarm: Total	Manufacturing	Trans., public util.	Trade	Services	Other[a]
Monroe	4,869	1,620	3,249	333	2,916	769	2,147	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Montgomery	13,512	3,226	10,286	272	10,014	1,700	8,314	2,190	609	2,496	[illegible]	[illegible]
Morgan	18,556	2,708	16,148	455	15,693	4,633	11,060	3,231	899	2,999	[illegible]	[illegible]
Moultrie	4,736	1,407	3,329	205	3,124	748	2,376	404	125	841	[illegible]	[illegible]
Ogle	18,272	3,502	14,770	931	13,839	2,654	11,185	5,710	312	2,615	[illegible]	[illegible]
Peoria	107,105	7,371	99,734	305	99,429	13,163	86,266	22,696	4,436	24,596	23,071	[illegible]
Perry	8,724	1,698	7,026	132	6,894	1,216	5,678	1,852	200	942	0[b]	[illegible]
Piatt	6,075	1,584	4,491	384	4,107	1,358	2,749	182	252	865	849	784
Pike	7,824	2,802	5,022	712	4,310	1,255	3,055	502	245	732	802	431
Pope	1,080	541	539	84	455	261	194	0[b]	0[b]	57	0[b]	[illegible]
Pulaski	3,620	725	2,895	81	2,814	665	2,149	207	102	262	1,497	64
Putnam	2,477	535	1,942	148	1,794	403	1,391	894	0[b]	203	112	[illegible]
Randolph	14,344	2,798	11,546	248	11,298	2,787	8,511	3,364	844	1,549	1,328	[illegible]
Richland	8,880	1,630	7,250	97	7,153	1,742	5,411	2,182	398	1,212	888	731
Rock Island	91,785	5,316	86,469	237	86,232	21,120	65,112	27,328	4,001	16,559	11,190	6,034
St. Clair	90,238	7,664	82,574	352	82,222	22,684	59,538	10,819	6,574	13,080	17,556	7,113
Saline	9,151	1,815	7,336	77	7,259	2,048	5,211	289	519	1,501	1,519	1,383
Sangamon	95,607	7,357	87,750	863	86,887	2,044	59,711	8,225	0[b]	3,831	18,482	7,024
Schuyler	3,344	1,349	1,995	210	1,785	734	1,051	81	38	452	298	182
Scott	2,559	792	1,767	154	1,613	474	1,139	80	105	320	121	487
Shelby	7,272	2,936	4,336	262	4,074	1,374	2,700	538	220	977	638	[illegible]
Stark	2,664	986	1,678	196	1,482	506	976	188	21	380	0[b]	[illegible]
Stephenson	24,059	3,531	20,528	486	20,042	3,039	17,003	8,052	574	2,950	2,800	[illegible]
Tazewell	57,460	3,965	53,495	334	53,161	5,950	47,211	27,102	2,277	8,503	4,687	[illegible]
Union	7,778	1,534	6,244	281	5,963	3,011	2,952	1,268	210	587	608	271
Vermilion	44,990	4,885	40,105	722	39,383	6,920	32,463	12,952	2,336	7,056	6,708	3,411
Wabash	6,660	1,077	5,583	97	5,486	923	4,563	1,429	1,162	796	708	1,271
Warren	8,881	2,231	6,650	449	6,201	1,443	4,758	1,027	281	1,856	1,182	370
Washington	5,385	2,038	3,347	251	3,096	882	2,214	382	174	682	670	297
Wayne	7,834	2,543	5,291	206	5,085	1,057	4,028	1,204	237	1,164	752	670
White	6,826	1,961	4,865	194	4,671	1,298	3,373	354	266	1,136	647	960
Whiteside	26,498	3,157	23,341	455	22,886	4,095	18,791	9,527	659	4,346	2,985	1,274
Will	87,513	7,342	80,171	567	79,604	14,553	65,051	21,353	7,245	16,162	13,101	7,190
Williamson	19,452	2,508	16,944	57	16,887	3,419	13,468	3,857	1,263	3,418	1,984	2,946
Winnebago	[illegible]	7,707	103,568	322	107,246	11,690	95,556	44,420	4,463	22,691	17,059	6,579
Woodford	9,600	[illegible]	[illegible]	640	[illegible]	1,628	4,789	1,940	292	1,742	1,184	522

Source: US Department of Commerce, Bureau of Economic Analysis.

[a]Includes mining, construction, finance-insurance-real estate, and other industries.

[b]Not shown to avoid disclosure of confidential information. Data included in totals.

Industrial Production



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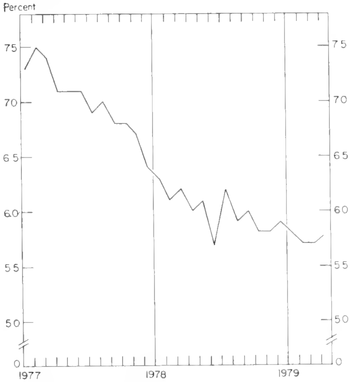
Unemployment Rates



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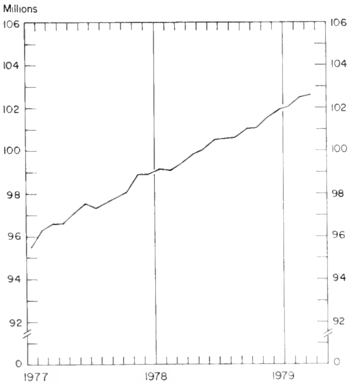
Employment



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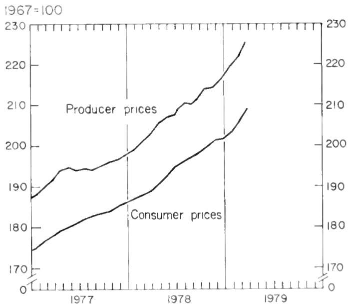
Producer and Consumer Price Indexes



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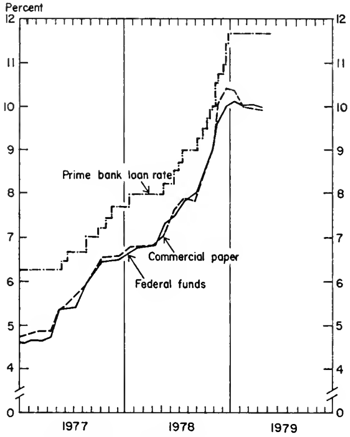
Interest Rates



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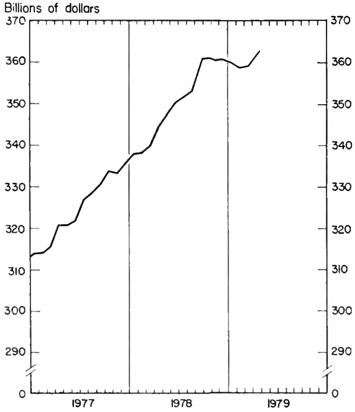
Money Supply



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Illinois Business Indexes

Item	March 1979	Feb. 1979	March 1978
Leading indicator (1969=100)	99.6[a]	98.3[a]	97.6
Coincident indicator (1969=100)	157.0[a]	156.9[a]	146.6
Employment-manufacturing (in thousands)[1]	1,242[a]	1,230	1,237
Weekly earnings-manufacturing[1]	$291[a]	$287	$267
Consumer prices in Chicago (1967=100)[2]	206.6[a]	202.6	186.3
Ordinary life insurance sales (in millions)[3]	$1,410.4	$1,118.7	$1,405.5
Retail sales (in millions)[4]	$3,211[a,b]	$3,131[a,b]	$3,493[b]
Farm prices (1967=100)[5]	253	248	211
Coal production (in thousands)[6]	5,189.1	4,122.9	432.7
Petroleum production (in thousands)[7]	1,640	1,478	1,844
Building permits (in thousands)[4]			
Residential housing units	3.3	18.3	5.5
Value of residential housing	$133,688	$55,292	$213,010
Value of nonresidential housing			
Industrial buildings	$26,218	$20,603	$19,250
Office, banks, and professional buildings	$44,915	$14,788	$27,327
Stores and other mercantile buildings	$23,029	$18,850	$14,408
Other	$56,710	$10,788	$30,408
	1978:III	1978:II	1977:III
Personal income (in millions)[4]	$98,292	$95,806	$86,920

[1]Ill. Dept. of Labor. [2]US Bureau of Labor Statistics. [3]Life Ins. Agcy. Manag. Assn. [4]US Dept. of Commerce. [5]Ill. Crop Rpts. [6]Ill. Dept. of Mines. [7]Ill. Geol. Survey.
[a]Preliminary. [b]Data for February 1979 compared with January 1979 and February 1978.

Regulation of the Financial Industry in Illinois

C. S. CHEUNG

Regulation of the financial system is frequently the object of legislation in Springfield and Washington. To gain insights into the relevant issues, it may be helpful to review the functions of the financial system, and to identify important changes in its operation. Such a review may permit a more meaningful evaluation of the merits of specific types of regulation.

Functions of a Financial System

In order to maintain high employment and promote sustained economic growth, funds must be channeled into productive investment. Financial intermediaries are an important part of this process. They enable borrowers to obtain funds at lower rates and on easier terms than if they borrowed directly from savers. Because of their lending expertise, administrative economy, and ability to diversify effectively, financial intermediaries reduce the risk embodied in their loans. As a result, the value of their loan assets is enhanced. Other features typically associated with intermediaries — such as deposit insurance and regulatory provisions designed to assure their solvency and liquidity — result in making their liabilities safer. Intermediation by financial institutions thus satisfies the portfolio preferences of both lenders and borrowers. If funds are to be used efficiently and effectively in productive investment, a financial system must be safe, sound, efficient, responsive, and socially responsible. The problem is to promote and maintain a financial system which does the job and at the same time satisfies the foregoing criteria.

Developments of the Last Two Decades

In the past two decades, the financial system has been buffeted by changes in technology, changes in the way funds flow into financial intermediaries, changes in the way funds are channeled into various uses, and by changes in public attitudes. In particular the financial system has not escaped impact of the new computer technology. The development of electronic funds transfer (EFT) has been made possible by computer technology; however, the specific application of that technology is a subject with which lawmakers in Washington and Springfield have been struggling. As EFT is integrated into the financial system, it is likely to alter the competitive structure of the financial industry.

The ways in which funds are drawn into financial intermediaries have been affected by several factors. The unstable economic conditions of the last two decades have been accompanied by wide swings in interest rates — especially on the upside. Financial institutions are adversely affected by high interest rates, as ceilings on various kinds of their deposits make it harder or impossible for them to compete for funds. As a result, six-month market certificates tied to the T-bill rate were authorized for banks and thrifts in June of last year.

In recent years, savings and loan institutions have developed negotiable orders of withdrawal — referred to as NOW accounts — and more recently banks have offered automatic transfers between their savings and checking accounts. These innovations have come about largely because of competitive pressures and general economic conditions. They have brought new challenges to liability management for all financial institutions.

The ways funds are channeled into various uses have also changed. Just as unstable economic conditions have affected the ways funds flow into financial intermediaries, so too they have affected the flow of funds out. The high rate of inflation has made mortgage lending more risky. Generally rising prices mean that dollars repaid later buy less goods and services. Inflation also drives up all interest rates, thereby depreciating market values of mortgages. The variable-rate mortgage and other devices have been developed to meet the problems of inflation and volatile mortgage rates. In addition, the rapidly growing market for consumer credit requires new ideas for asset management. Financial instititions have been competing vigorously in this market.

Changes in public attitudes also have had an impact on the financial system. The civil rights movement in the last two decades and the urban crisis in the 1970s resulted in the Anti-Redlining and the Community Reinvestment Act. Social responsibility has become more important.

Effects of Changes on Financial Institutions in Illinois

The structure of the financial system in Illinois is unusual. Like other states, Illinois banks and other thrift institutions compete for the funds of savers. Unlike most other states, banks in Illinois are not allowed to have full-service branches. Under the Illinois Banking Act of 1976, each bank is allowed to have one limited-service facility within 3,500 yards of the home office. But this limited-service facility cannot lie within 600 feet of the headquarters of another bank. The restriction on full-service branching fosters a geographic monopoly for each bank. The other unique feature of the Illinois financial system is that there are a few large banks in Chicago with the rest of the state serviced by relatively small banks.

In contrast, federal chartered savings and loan associations and credit unions were recently empowered to open an unlimited number of full-service branches anywhere in their home states. The Illinois General Assembly promptly granted parity to state-chartered savings and loan associations by allowing them to move their headquarters to a new county, leaving the former head-

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quarters as branch offices. This relocation has the effect of allowing full-service branching for S&Ls in Illinois.

This suggests that monetary policy and other changes may affect banks and thrifts differently and changes may have uneven impact on the few large Chicago banks and the other smaller banks. EFT, made possible by computer technology, presumably will increase consumer convenience even though the banking system in the State has not yet made this service available to consumers. The reason is that the unit banking system currently prevails in the State. Any forms of electronic funds transfer systems such as automatic teller machines and point of sale terminals are considered branches and are therefore, prohibited in Illinois. It is often argued that the unit banking system in Illinois — characterized by the coexistence of a few large banks and many small independent banks — has prevented favorable changes in the state's financial system. According to this view, the financial system in Illinois is not responsive enough to receive the benefits brought about by new developments.

Problems in the Regulation of Financial Institutions in Illinois

The task of regulation is to enable financial institutions to serve their purpose and at the same time satisfy the already mentioned criteria. This is difficult and has rarely been successful in the past. Serious conflicts have always existed in the criteria. Safety considerations require more restrictions on liability management of financial institutions and serve to reduce competition among institutions. Changes in the unit banking system to reduce geographical monopolies would foster increased concentration of bank resources. The preponderance of small independent banks in Illinois suggests that the state's banking industry may not be achieving sufficient economies of scale.

Branching would probably alter the geographic allocation of funds. Proponents of branching allege that, as a result, economic growth would be promoted. Even so, efforts to change the structure of the unit banking system have not been successful. Some point to the fear that, with branching, a few large Chicago banks might drive out the smaller independent downstate banks. Also, there is a reluctance to accept the risk of further concentration of banking resources.

The financial system in Illinois is an open system constantly under the bombardment of change. The proposed Illinois Bank Act of 1979 introduced before this year's session of the General Assembly would permit a limited form of multibank holding companies. Whether this proposed act will create concentration of economic resources in a few large banks is of concern to the legislators and to small independent banks. The changes in the last two decades have been so rapid that legislators and regulators seem unable to keep pace with them. To maintain our financial system in good health, these changes must be dealt with.

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Pessimistic Scenario

So far this year the economy has operated at near-capacity and has continued to register lackluster increases in productivity. Although evidence remains inconclusive about whether a recession in the economy is imminent or already under way, recent data point toward an end of the rapid four-year expansion, and energy shortages are becoming increasingly difficult.

The second quarter got off to a slow start. Growth in industrial output was hampered by the Teamsters' strike. Consumer purchases, hindered by gasoline difficulties, have risen more slowly than the rate of inflation. Labor markets weakened in the spring, the first slowdown since mid-1978. Reflecting these developments, the rise in consumer income was held to its smallest increase in over two years.

Reduced Output Growth

The supply side of the economy has become increasingly important in constraining further gains in output. The first quarter saw near zero growth because of weather-induced supply disruptions. April data were dominated by the Teamsters' strike, and May figures fell victim to gasoline shortages.

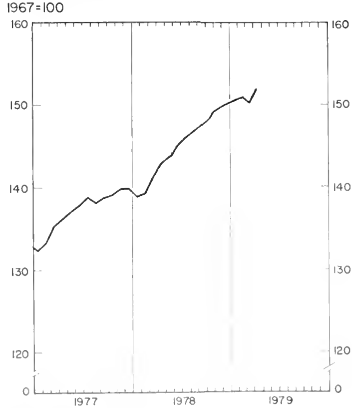
Real GNP — that is, gross national product adjusted for the estimated effects of inflation — probably grew by only about 3 percent this past quarter, compared with an over-8-percent growth rate in the second quarter of 1978. However, quarterly growth rates of real GNP have proved highly unstable in recent years, and have occasionally been inconsistent with changes in other data such as industrial production and employment.

Sharp drops in two economic indicators at the beginning of the second quarter caused overall economic growth estimates for the remainder of the year to be revised downward. Factory orders for durable goods fell over 8 percent in April, after showing strong gains in the preceding four months. The decline in new factory orders was the largest since the 6.6 percent plunge at the end of 1974. April orders for nondefense goods, often used as bellwether for future plant and equipment spending, dropped over 13 percent.

Despite recent declines in overall utilization rates, capacity usage remained at a relatively high level in the second quarter. The overall capacity utilization rate hovered only about 2 percentage points below its 1973 record for the past half year. Factories operated at nearly 85 percent of capacity in April, the lowest operating rate since mid-1978. Even so, the April rate was only slightly below the adjusted 86.1 percent in March. Industrial production fell sharply in April — primarily because of the Teamsters' strike and the related steel haulers' dispute, then rebounded in May. In the spring of last year, the overall operating rate was an adjusted 83.7 percent.

In spite of uncertainties regarding the economic outlook, businesses began beefing up inventories in the first quarter of this year. This is good for the short-term health

Industrial Production



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Stock Options: Characteristics and Uses By *John E.* [illegible]

of the economy. Strong business spending and inventory buildup could add momentum to the current expansion, which has already lasted more than four years. Moreover, inventory buildups could proceed for a protracted period. Inventories continue to be low relative to sales. In March, the inventory-to-sales ratio was 1.37, the lowest level since September 1950. At the same time, expectations regarding heightened inflation place a premium on expanded business inventories. Indeed, the recent inventory increases may be in response to the sharp rise in raw materials prices and the uncertainty surrounding possible shortages, particularly with oil-related products.

Construction activity is leveling off. Construction spending has fluctuated around a seasonally adjusted annual rate of $210 billion since mid-1978. Given the rise in housing costs, this would imply that real activity has actually declined. Housing starts fell over 2 percent early in the second quarter after rebounding sharply in March. Housing expansion appears to be slowing down gradually, rather than abruptly, despite rising costs and record mortgage interest rates. The number of building permits, an indicator of future construction activity, has been rising but still remains about 4 percent below last year's figure.

Productivity Declines

Productivity in the private business sector has declined and unit labor costs have soared. Productivity, defined as output per hour of work, fell at a seasonally adjusted annual rate of 4.5 percent in the first quarter of this year. The drop in productivity, combined with an 11.1 percent rate of increase in hourly compensation, propelled the labor costs of producing a unit of output to a 16.3 percent adjusted annual rate of increase. Partly responsible for the decline in productivity was a sharp increase in employment in the first quarter. With the addition of new workers, hours worked rose at a snappy 5 percent adjusted annual rate, while output rose by only 0.3 percent.

In the manufacturing sector, productivity fell at an annual rate of about 3 percent, the first drop since the first quarter of 1978. Unit labor costs in this sector rose at about a 13 percent rate. The productivity decline in manufacturing centered in durable goods. Between 1965 and 1973, the average annual growth in productivity in the nonfarm sector was about 2 percent, down from 2.6 percent in the two preceding decades. In recent years, however, the increase has been averaging 1 percent or less.

Income Growth Weak

Personal income joined the list of statistics indicating weakness in the second quarter. Trucking stoppages and flooding helped hold personal income in April to the smallest increase in more than two years. Personal income rose a scant 0.3 percent, or $6 billion, in April. The income figures are far from a testimonial to the economy's strength. If the trucks, airlines, factories, and rivers had behaved as usual in the beginning of the second quarter, personal income was estimated to increase only 0.7 percent. Wages and salaries rose an average 2 percent in the first quarter of 1979, compared with 1.5 percent in the final quarter of 1978 and 1.9 percent in the first quarter of 1978. The wage and salary increase for the 12 months ending March 31 was 7.8 percent.

The first quarter jump in corporate profits rekindled the debate whether the earnings are fueling or from inflation. After-tax corporate profits climbed a seasonally adjusted 5.7 percent in the first quarter, a relatively moderate increase considering the rate of inflation. But profits were also 35.1 percent above the first quarter of 1978, the fattest increase in three years.

Inflation Continues Unabated

Inflation prospects are not good, hindered by poor productivity performance and continued large increases in food and energy prices. Consumer prices are expected to rise 10.3 percent over the four quarters of 1979. The inflationary surge has been developing for a long time. Consumer prices rose at an annual rate of 4.5 percent in the fall of 1976, the lowest pace since the 1974–75 recession. In the following two years, the inflation rate doubled, and since last fall the price rise has accelerated further. The beginning of the second quarter of this year saw price increases equivalent to a 13.2 percent annual rate. These price explosions provide a dismal outlook on the economy and could lead to a recession.

The upward price pressure continues unabated. Gasoline prices have been the most noticeable inflation problem in recent months. They jumped 6 percent in April alone, the largest monthly increase since the oil embargo in 1974 when prices were pushed up 7.3 percent. Since the beginning of the year, gasoline prices have risen a seasonally adjusted 14.4 percent.

Food prices are also skyrocketing. During this year's first quarter, food and beverage prices rose at an annual rate of 17.6 percent, up from a 14.4 percent rate a year earlier, and the highest quarterly increase since the 17.7 percent rise in the second quarter of 1978. Housing costs have been rising steadily at about 1 percent per month this year. Producer prices for finished goods were also rising at the beginning of the second quarter at a 10.8 percent annual rate.

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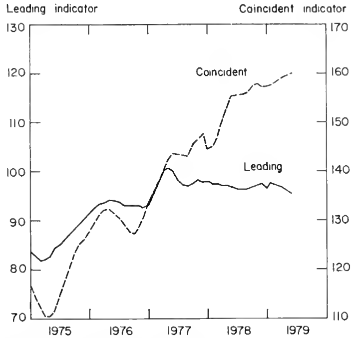
Illinois Economic Indicators

The leading indicator slipped for the second time in the last three months as one of its major components declined. Although building permits inched up slightly in April, the decline in average weekly hours was so large that it caused the leading indicator to fall. The coincident indicator scored a small gain in the same month. Weekly earnings in manufacturing, which is one of the components in the coincident indicator, dropped slightly after adjusting for inflation. Employment in the nonagricultural sector continued to increase for the last few months. Data for retail sales and layoff rate were not available at press time. CHUN-SANG CHEUNG



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Illinois Pharmaceuticals

Illinois is one of the major pharmaceutical producers in the country, although the pharmaceutical industry is not a major one in the state in terms of value added by manufacturer.

Among all major industries, pharmaceuticals have been one of the most successful at keeping prices down. In terms of real dollars, considerably less is paid for prescription drugs now than a decade ago. Between 1967 and 1978, prices for all goods rose 99.3 percent. The price of prescription drugs, however, rose less than 34 percent. This figure is especially remarkable considering the effect of Food and Drug Administration regulations on the drug industry. During the early 1960s, it cost approximately 2 years and $1.5 million, after basic research had been completed, to develop a new drug and win federal approval to market it. Today, that cost has risen to at least $15 million and 10 years. Yet in 1978, when all costs were rising 8.3 percent, drug prices rose 7.6 percent.

Consumer Expenditures

Consumers spend more on average for football tickets than for prescription drugs. In 1976 the average charge for a new prescription drug was $5.60, with refill prescriptions averaging somewhat less; about $600 per person was spent for health services and supplies in the US, with only $31 annually on the average for out-of-hospital prescriptions. Approximately 70 percent of all medicines are dispensed through prescriptions.

Quality improves at lower cost. In 1962, it took 1 hour and 49 minutes in average hourly wages to earn the price of the average prescription. Today it requires 1 hour and 23 minutes. But the average 1976 prescription was 55 percent larger than the 1962 prescription. Adjusting for this size increase, the cost in 1976 work time becomes only 54 minutes. Both hospital and out-of-hospital prescription medicines consumed 10 cents of every dollar spent on health care in 1960. Today that figure is 7 cents. Industry economists estimate that retail pharmacy prescriptions alone account for only about 5 cents of every dollar spent on medical care.

Historical Perspective

The discovery of sulfa drugs in the 1930s acted as a catalyst for expanded interest in pharmaceutical research. In the past 3 decades, nearly 1,000 new single-chemical ethical drugs have been introduced. The smallest number, 9, was recorded in 1969, the largest, 65, in 1959. From 1941 to 1959 there was a 4-fold increase in introductions of new single-chemical drugs; from 1960 to 1975, a 3-fold increase. About two-thirds of the new drugs appeared before 1960. A decline in new product introduction would probably have occurred even without the increased regulatory requirements in the 1960s. Industry researchers began addressing more complex problems, and developing more sophisticated instruments and techniques for measuring safety and effectiveness.

There is little doubt, however, that regulation is an important factor in the decline in the introduction of new pharmaceuticals. Modifications in the regulatory process since the late 1950s have increased the time needed to test new drugs and to meet other requirements of the FDA. Compared with an average of approximately 2 years prior to the 1962 amendments to the federal Food, Drug, and Cosmetic Act, 10 years on average may elapse

between discovery of a new drug and the FDA's final approval.

The increase in the costs of research and development per drug introduced is even more spectacular than the increased time required for approval. A recent survey estimated that the cost of developing a new single-chemical entity rose from $1.2 million in 1962 to $11.5 million in 1972 and $24.4 million in 1974, a 20-fold increase. Major causes of rising costs included the accelerating costs of medical care in the clinical trials, more elaborate toxicology studies required by stricter government regulation, inflation, and the requirement for more complex and sophisticated research techniques.

Competition in the Industry

Pharmaceuticals are one of the more competitive industries in the US. The Census Bureau lists about 400 establishments in the US which produce 99 percent of the product (production measured in dollars). In a study of market shares held by the 4 leading firms in each of the 453 manufacturing industries, the Census Bureau found the pharmaceutical industry to be one of the least concentrated. The 4 leading firms have about 26 percent of all the market and the top 20 firms account for over 74 percent of all domestic sales.

Companies have also been grouped by sales categories to evaluate the degree to which the market is shared. In the US, 21 companies with sales over $100 million accounted for 86.7 percent of the market. The largest company represents 8.2 percent of total sales. Firms with sales between $30 million and $100 million shared 11.3 percent of the domestic market. The remaining 2 percent came from companies with sales under $30 million.

Many pharmaceutical firms have diversified in recent years. Most larger firms now also make a variety of "over-the-counter" products available for sale without a prescription. Many also produce pharmaceuticals for veterinary use. An increasing number of companies manufacture medical equipment, medical devices, diagnostic products, and hospital supplies. Some firms are important suppliers of chemicals used in other industries.

Employment

The direct economic contribution of the industry is substantial. During 1977 the industry employed nearly 300,000 persons in domestic and foreign operations and in 1976 in Illinois it employed over 14,000 persons, up about 10 percent from 1975. Of the nearly 169,000 US employees, over 50 percent were production workers, an increase of 6.2 percent over 1976. About 22 percent were in marketing and distribution. In Illinois, production workers represent about 37 percent of the labor force.

Research and Development

Of all US industries, the pharmaceutical industry is the most research-intensive. It spends 4 to 5 times as much of its sales income on research, and much more of its total research budget on fundamental research than US industry overall. Government funds play a small role in this effort, accounting for less than 1 percent of all spending. Government funds, on average, account for 37 percent of all spending for US industry as a whole.

The cost of research has risen substantially in recent years. At the beginning of World War II, the pharmaceutical industry was spending only a few million dollars annually on research and development. Since little drug research existed outside the industry, this amount was relatively significant. By 1951 these R&D expenditures reached $50 million per year, and by 1977, R&D budgets had soared over $1.3 billion annually.

Most of the applied R&D (that is, research with specific commercial objectives) is allocated to the search for drugs to treat central nervous system diseases, infections, neoplasms, and cardiovascular problems. Pharmaceutical products acting on the central nervous system accounted for 25.2 percent of domestic sales in 1977.

The share of basic research of total R&D expenditures has declined under the impact of stricter regulatory requirements, even though expenditures for it have risen. Basic research is conducted without specific commercial objectives, but directed toward advancing scientific knowledge that is necessary before applied R&D can begin.

The sums allocated to R&D compared with sales provide one measure of the extent to which companies are committed to research. In comparing companies by R&D expenditure category, the highest R&D to sales ratio is found among firms with expenditures ranging from $10 to $30 million. The ratios for domestic R&D range from 14.4 percent for companies in the $10–$30 million category to 3.6 percent for those under $1 million.

Drug Equivalency and Generic Prescribing

Pharmaceutical products all have 2, and many have 3 separate and distinct names; all drug products have both the scientific or chemical name(s) and the generic name(s) of the active ingredients. The manufacturer may also give the product a brand name. The scientific name gives the exact chemical composition of the basic chemotherapeutic agent. The generic name is shorter and simpler, and sometimes is informative as to chemical composition.

The National Formulary (NF) and the US Pharmacopeia (USP) are the US books of standards for the chemical content of individual drug entities included in drug products. When a product meets the USP or NF standards it does not necessarily mean that it is as good as any other product meeting the same standards. There is more to a pharmaceutical product than the chemical and physical characteristics of the active ingredient(s). Two products that contain equal amounts of the same active ingredients may not contain the same amounts or types of inert ingredients and may not have equal bioavailability. In nontechnical terms, bioavailability is the degree to which a drug is absorbed to produce the desired therapeutic effect. Some products may exceed USP or NF requirements of purity of quality.

Generic prescribing means that the physician uses the established (generic) name of the drug without identi-

(Continued on page 12.)

Comparative Economic Data for Selected Illinois Cities, April 1979

		Building permits[1] (000)	Electric power consumption[2] (000,000 kwh)	Postal receipts[3] (000)	Employment[4] (000)	Estimated work force unemployed[4] (percent)
ILLINOIS		$ 69,530[a]	3,590.2[a]	$ 51,452[a]	4,933.9	6.0
Percentage change from	Mar. 1979	-46.1	-2.2	-7.9		
	Apr. 1978	-42.0	+12.4	+17.8		
NORTHERN ILLINOIS						
Chicago		$ 25,865	1,795.2	$ 39,747	3,168.9[b]	5.0[b]
Percentage change from	Mar. 1979	-69.6	+1.2	-10.0		
	Apr. 1978	-62.6	+12.7	+17.6		
Aurora		$ 4,438	118.6	$ 579	37.1	5.0
Percentage change from	Mar. 1979	+102.1	-10.6	-5.5		
	Apr. 1978	+15.3	-6.5	+17.9		
Elgin		$ 1,093	100.3	$ 676	27.1	5.8
Percentage change from	Mar. 1979	-27.4	-5.4	-5.9		
	Apr. 1978	+15.2	+26.8	+29.5		
Joliet		$ 1,652	420.5	$ 372	45.4	5.2
Percentage change from	Mar. 1979	+30.3	-5.1	+8.4		
	Apr. 1978	-56.0	+19.7	+18.8		
Kankakee		$ 1,020	82.6[c]	$ 239	36.6[b]	8.7[b]
Percentage change from	Mar. 1979	+92.3	-4.0	+14.3		
	Apr. 1978	+41.4	+24.2	+3.0		
Rock Island-Moline		$ 2,744	117.2[d]	$ 1,433	172.8[b]	3.8[b]
Percentage change from	Mar. 1979	+15.4	-6.9	-2.3		
	Apr. 1978	[illegible]	+8.4	+34.3		
Rockford		$ 5,223	173.1	$ 1,008	[illegible][b]	4.8[b]
Percentage change from	Mar. 1979	+29.0	+0.1	+9.4		
	Apr. 1978	[illegible]	+18.8	+25.5		
CENTRAL ILLINOIS						
Bloomington-Normal		$ 3,222	45.1	$ 1,006	55.9[b]	4.0[b]
Percentage change from	Mar. 1979	+53.6	-11.5	-1.2		
	Apr. 1978	-62.0	+8.6	+11.4		
Champaign-Urbana		$ 1,036	45.8	$ 711	76.0[b]	3.9[b]
Percentage change from	Mar. 1979	-26.3	-9.1	-1.3		
	Apr. 1978	[illegible]	+5.5	+9.0		
Danville		$ 829	44.5	$ 226	18.2	7.3
Percentage change from	Mar. 1979	+60.0	-3.0	+3.6		
	Apr. 1978	[illegible]	+3.4	+8.1		
Decatur		$ 2,857	124.5	$ 543	54.9[b]	5.8[b]
Percentage change from	Mar. 1979	+92.6	+0.3	+2.4		
	Apr. 1978	[illegible]	+23.2	+26.5		
Galesburg		[illegible]	30.8[c]	$ 154	15.0	7.1
Percentage change from	Mar. 1979	[illegible]	-3.1	+1.9		
	Apr. 1978	-26.8	-4.4	+4.7		
Peoria		$ 7,376	194.0	$ 1,505	163.3[b]	4.9[b]
Percentage change from	Mar. 1979	-7.2	-6.1	-5.4		
	Apr. 1978	[illegible]	+6.3	+20.4		
Quincy		$ 228	38.6	$ 234	19.6	5.4
Percentage change from	Mar. 1979	-56.2	-5.1	+2.6		
	Apr. 1978	-44.3	+0.5	+21.8		
Springfield		$ 9,375	102.2	$ 2,003	87.6[b]	5.4[b]
Percentage change from	Mar. 1979	-16.8	-12.5	+0.3		
	Apr. 1978	+144.0	+13.8	+20.0		
SOUTHERN ILLINOIS						
East St. Louis		$ 424	21.5	$ 198	22.6	9.6
Percentage change from	Mar. 1979	+26.9	-10.7	+3.1		
	Apr. 1978	+346.3	-12.2	+22.2		
Alton		$ 582	79.1	$ 143	[illegible]	[illegible]
Percentage change from	Mar. 1979	-79.6	[illegible]	+4.3		
	Apr. 1978	+252.8	+12.1	[illegible]		
Belleville		$ 503	23.1	[illegible]	[illegible]	[illegible]
Percentage change from	Mar. 1979	-68.0	-6.2	[illegible]		
	Apr. 1978	[illegible]	+7.4	[illegible]		
Carbondale-Murphysboro		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percentage change from	Mar. 1979	[illegible]	[illegible]	[illegible]		
	Apr. 1978	[illegible]	[illegible]	[illegible]		

[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local post office reports; accounting period ending 20 April 1979. [4]Illinois Department of Labor; preliminary.

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory. [d]Includes East Moline. [e]Data for Carbondale township.

Illinois Income Mirrors that of the US

The Illinois economy has been described as a microcosm of the national economy. Close parallels are observed in terms of labor force distribution by occupation and industrial classification, composition of gross product, and the relative weights of output by specific sectors.

The location quotient is yet another measure of the extent to which the state's economy is representative of the entire country. The state location quotients presented in the first row of this table were calculated by dividing the percentage of total Illinois earnings derived from each major source of income by the percentage of total US earnings from similar sources. A location quotient of 1 indicates that income from an economic sector in the state is generated in a proportion similar to the nation for any given sector. Farm income in 1977, for example, represented 2.29 percent of total earnings in Illinois. The location quotient of 1.0203 simply means that slightly more income is generated in the agricultural sector in

1977 Personal Income By Major Sources - Location Quotients

	Farm		Mining		Construction		Manufacturing		Transportation and public utilities		Wholesale trade	
	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
State	1.0203	1.0000	.6578	1.0000	.9430	1.0000	1.1366	1.0000	1.0495	1.0000	1.2199	1.0000
Adams	2.2608	2.2159	.3411	.5186	.7230	.7667	1.2729	1.1199	.9067	.8639	0	0
Alexander	1.0501	1.0027	0	0	1.3421	1.4233	1.2015	1.0571	1.6201	1.5437	.9429	.7730
Bond	8.9494	8.7717	1.5625	2.3755	.6461	.6852	.5309	.4671	.8908	.8488	1.1692	.9585
Boone	.8896	.8720	0	0	.6695	.7100	2.6277	2.3120	.6292	.5995	.3090	.2533
Brown	12.8757	12.6200	0	0	0	0	.1040	.0915	.9911	.9443	1.2034	.9865
Bureau	9.2164	9.0334	.4213	.6406	1.3866	1.4704	.9507	.8365	.5808	.5533	.8817	.7228
Calhoun	16.3702	16.0452	.4402	.6692	.4292	.4552	.0481	.0423	.2282	.2174	1.1740	.9623
Carroll	2.3622	2.3153	.3649	.5548	.5839	.6193	.5383	.4736	2.5083	2.3899	.7295	.5980
Cass	8.7759	8.6017	-.0719	-.1093	.6471	.6862	1.1937	1.0502	0	0	.8513	.6979
Champaign	2.7040	2.6503	.1173	.1784	.9629	1.0211	.3666	.3225	.6067	.5781	.7558	.6196
Christian	10.2973	10.0929	9.5243	14.4801	.5326	.5648	.5295	.4659	.9034	.8608	1.0819	.8869
Clark	4.7643	4.6697	7.2359	11.0010	.9357	.9923	.6456	.5680	1.4166	1.3498	1.1780	.9657
Clay	2.4637	2.4148	13.0743	19.8773	.5018	.5321	.6358	.5594	.9796	.9333	.8442	.6920
Clinton	7.0554	6.9153	0	0	1.1570	1.2269	.3812	.3354	1.0618	1.0117	0	0
Coles	4.2447	4.1604	0	0	1.1885	1.2604	1.0446	.9191	1.3631	1.2988	.6346	.5202
Cook	.0122	.0120	.1259	.1914	.8369	.8875	1.1099	.9766	1.1729	1.1176	1.4858	1.2180
Crawford	2.3761	2.3289	5.1107	7.7699	1.5750	1.6703	1.4857	1.3071	.8401	.8004	1.0221	.8379
Cumberland	5.4427	5.3347	0	0	.3570	.3786	.6315	.5556	0	0	.5989	.4909
DeKalb	1.0420	1.0213	0	0	.9203	.9760	1.2750	1.1218	.5271	.5022	1.0208	.8368
DeWitt	12.9744	12.7168	.1104	.1678	0	0	.6805	.5988	1.5842	1.5094	1.0424	.8545
Douglas	11.6529	11.4215	0	0	.8736	.9265	.8028	.7064	.9238	.8802	.6484	.5315
DuPage	.1325	.1299	0	0	1.5898	1.6860	.8537	.7511	.8036	.7657	1.6648	1.3647
Edgar	15.6223	15.3121	.4523	.6877	.6013	.6376	.9005	.7923	0	0	.8523	.6987
Edwards	6.9797	6.8412	0	0	.5264	.5582	1.7036	1.4989	.4364	.4275	.8132	.6666
Effingham	2.9290	2.8708	.6214	.9447	1.0614	1.1256	1.2095	1.0641	1.2477	1.1888	1.1734	.9618
Fayette	5.0759	4.9751	3.3574	5.1044	.7209	.7645	.7419	.6527	.8174	.7788	1.0121	.8297
Ford	14.8078	14.5138	.2337	.3552	.7670	.8134	.7020	.6177	.7176	.6838	1.3008	1.0663
Franklin	.7253	.7109	26.1045	39.6875	.8830	.9364	.1675	.1473	.8106	.7724	.6582	.5396
Fulton	3.7320	3.6579	14.6387	22.2556	.4881	.5176	.9474	.8336	.5691	.5423	.4111	.3370
Gallatin	4.9315	4.8336	34.4774	52.4171	.4811	.5102	.2693	.2369	.1146	.1091	.6781	.5558
Greene	7.7001	7.5472	0	0	.6415	.6803	.4241	.3731	1.9689	1.8760	1.0792	.8847
Grundy	4.4356	4.3475	0	0	1.4005	1.4852	1.2009	1.0566	2.3254	2.2156	.7076	.5800
Hamilton	10.1003	9.8998	5.6876	8.6470	.5046	.5351	.2580	.2270	.8341	.7947	.5555	.4554
Hancock	10.5290	10.3199	0	0	1.2707	1.3475	.3588	.3157	.9650	.9194	.9503	.7790
Hardin	-.5307	-.5202	32.5575	49.4982	0	0	.0374	.0329	.8939	.8517	.1200	.0984
Henderson	21.7366	21.3050	.8037	1.2219	.7585	.8043	.0387	.0341	.5845	.5569	.7700	.6312
Henry	6.8531	6.7171	0	0	1.6620	1.7625	.8058	.7089	.9620	.9166	0	0
Iroquois	17.0750	16.7360	.2185	.3323	.6095	.6464	.6584	.5792	.3910	.3725	.9925	.8136
Jackson	1.4854	1.4559	2.7505	4.1817	.8360	.8866	.2663	.2343	.9029	.8603	.2524	.2069
Jasper	6.3922	6.2653	2.9534	4.4901	0	0	.3640	.3208	.6402	.6100	.9504	.7791
Jefferson	.6087	.5966	17.9209	27.2457	1.1983	1.2708	.4455	.3920	.9831	.9367	.7728	.6335
Jersey	9.2358	9.0524	0	0	.6060	.6427	.3218	.2831	.8049	.7669	1.2981	1.0641
JoDaviess	2.5115	2.4616	0	0	1.3871	1.4710	1.3044	1.1476	.6954	.6625	.9540	.7821
Johnson	1.7935	1.7579	0	0	1.1837	1.2553	.2517	.2215	0	0	1.5557	1.2752
Kane	.1506	.1476	0	0	.9034	.9580	1.3787	1.2130	.6084	.5797	.8616	.7063

Illinois than in the agricultural sector of the US as a whole. Similarly, income derived from the construction industry in Illinois yields a location quotient of .9430, indicating that slightly less income is generated in this sector than in the US.

On the whole, Illinois personal income is "located" in proportionately the same areas as in the US, the only major exception being the amount of income generated in the government sector. Income derived from state and local governments in Illinois yields a location quotient of .8901. At the federal level, civilian and military, location quotients are found to be .5862 and .4506, respectively.

Location quotients are also presented for each of the counties in Illinois. They are useful in identifying counties which have the same composition of income as the state, as well as counties where certain economic sectors predominate. Mining, for example, generates a disproportionately large share of income in several counties in the southeastern portion of the state.

Retail trade		Finance, insurance, real estate		Services		Agr. services, forestry, fisheries, and other		Government					
								Federal, civilian		Federal military		State and local	
US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
.9447	1.0000	1.0877	1.0000	.9704	1.0000	.5580	1.0000	.5862	1.0000	.4506	1.0000	.8901	1.0000
1.0633	1.1256	.5874	.5400	0	0	1.1358	2.0354	.2505	.4273	.0886	.1967	.6825	.7668
1.1865	1.2560	0	0	0	0	.8337	1.4941	.5543	.9454	.1324	.2939	1.1346	1.2747
1.0374	1.0981	0	0	1.2185	1.2556	0	0	.2347	.4003	.1522	.3379	.8409	.9447
.4257	.4507	.3055	.2808	.3363	.3466	0	0	.0816	.1392	.0562	.1248	.4959	.5571
1.0722	1.1350	1.1089	1.0194	0	0	6.1833	11.0806	.3590	.6124	.1395	.3097	1.0837	1.2174
.7859	.8320	.4979	.4577	.7680	.7915	1.3421	2.4051	.1579	.2694	.0925	.2054	.9148	1.0278
1.4090	1.4916	.6051	.5563	.6525	.6724	2.6414	4.7335	.8069	1.3763	.1527	.3390	1.4257	1.6017
1.1112	1.1763	.7912	.7274	.6081	.6266	3.1429	5.6323	3.1977	5.4545	.3291	.7304	1.0654	1.1969
.8277	.8762	.5637	.5182	0	0	.6261	1.1219	.2913	.4968	.0865	.1919	.7362	.8270
1.0705	1.1332	.5794	.5326	.8505	.8765	.5177	.9277	1.3044	2.2249	6.8345	15.1691	2.0980	2.3570
.8289	.8775	.4834	.4444	.6527	.6726	1.3852	2.4823	.1556	.2654	.0907	.2014	.6847	.7692
1.1598	1.2277	.3924	.3607	.5315	.5477	2.7188	4.8722	.2716	.4633	.1176	.2610	1.0538	1.1838
1.0161	1.0757	.4246	.3904	.6666	.6869	2.7816	4.9848	.2202	.3756	.1187	.2633	1.3753	1.5451
1.1805	1.2496	.4848	.4457	.8275	.8527	1.5108	2.7075	.1706	.2909	.1254	.2783	1.7901	2.0111
.9676	1.0243	.5472	.5030	.6274	.6466	0	0	.1593	.2717	.0820	.1820	1.4252	1.6011
.9280	.9823	1.3528	1.2437	1.0805	1.1135	.3103	.5560	.6031	1.0287	.0762	.1691	.8225	.9241
.6800	.7199	.4686	.4308	.4440	.4576	1.4631	2.6219	.1436	.2458	.0822	.1824	.6223	.6992
1.6722	1.7701	.5580	.5130	0	0	0	0	.2430	.4144	.2337	.5187	1.5330	1.7222
1.0162	1.0757	.6067	.5577	.5220	.5379	0	0	.1765	.3011	.0991	.2199	2.0975	2.3564
1.0561	1.1180	.6078	.5587	0	0	1.5624	2.7999	.1422	.2426	.1035	.2298	.7041	.7910
.6581	.6966	.3082	.2833	0	0	.4154	.7443	.1394	.2379	.0703	.1561	.5574	.6262
1.1618	1.2299	1.0453	.9610	1.3973	1.4399	0	0	.2376	.4052	.0746	.1656	.7379	.8289
.6953	.7360	.4305	.3957	.5010	.5163	0	0	.1315	.2243	.1262	.2802	.6741	.7573
.4727	.5004	0	0	.4035	.4158	1.9289	3.4567	.1977	.3373	.1234	.2739	.5972	.6710
1.2447	1.3176	.4096	.3765	.7719	.7955	.9649	1.7291	.3159	.5388	.0751	.1666	.6777	.7614
1.2540	1.3274	.6001	.5517	.6565	.6765	1.4425	2.5851	.4157	.7091	.1201	.2666	1.5269	1.7154
.7207	.7629	.5969	.5488	.4966	.5117	1.1547	2.0693	.1588	.2709	.0704	.1562	.8174	.9182
.9350	.9898	.4546	.4179	.7172	.7391	.5177	.9277	.2525	.4306	.1278	.2837	1.0798	1.2130
.8839	.9357	.5082	.4672	.6556	.6756	1.0990	1.9695	.1491	.2544	.1018	.2260	.8966	1.0072
.6275	.6643	.1846	.1697	.2289	.2359	2.1171	3.7940	.1153	.1967	.0705	.1565	.6565	.7375
1.2165	1.2878	.5957	.5477	.6158	.6345	0	0	.5127	.8745	.1579	.3505	1.4019	1.5749
.9622	1.0185	.4343	.3992	.4240	.4369	0	0	.1461	.2492	.0757	.1680	.6440	.7235
1.0161	1.0756	.5145	.4730	.6009	.6193	2.7062	4.8496	.5978	1.0197	.1724	.3827	1.9220	2.1592
1.0346	1.0951	.6607	.6074	.8776	.9043	0	0	.2688	.4584	.1462	.3245	1.2578	1.4130
.7019	.7430	.2637	.2424	.7728	.7964	0	0	.5780	.9860	.1368	.3035	1.1906	1.3376
.7574	.8017	.9711	.8927	.3368	.3471	2.3501	4.2114	.2588	.4415	.1645	.3652	1.2329	1.3851
1.2198	1.2913	.6550	.6022	.6374	.6568	2.4307	4.3559	.2254	.3844	.1296	.2877	.9271	1.0416
.8706	.9216	.5742	.5279	.5545	.5714	1.0612	1.9017	.1518	.2590	.1222	.2715	.7415	.8330
1.2185	1.2899	.6009	.5525	.8268	.8520	.4387	.7861	.4571	.7797	.0995	.2203	3.5459	3.9836
.7531	.7972	.3375	.3102	0	0	1.0455	1.8736	.2499	.4262	.0876	.1944	.6630	.7449
1.0512	1.1128	.7545	.6936	.8392	.8648	1.3045	2.3378	.2702	.4608	.0869	.1929	.7784	.8745
1.4183	1.5013	.5365	.4932	.8666	.8931	1.1347	2.0334	.2574	.4391	.1725	.3831	1.6652	1.8708
1.1173	1.1827	.7508	.6902	.5811	.5989	0	0	.2348	.4005	.1752	.3888	1.1287	1.2680
1.4807	1.5674	.6104	.5612	.4303	.4434	1.1909	2.1342	.9014	1.5375	.2227	.4942	2.4206	2.7194
1.1219	1.1876	.8042	.7393	.9906	1.0208	0	0	.5800	.9894	.0847	.1880	1.0963	1.2317

1977 Personal Income By Major Sources - Location Quotients (continued)

	Farm		Mining		Construction		Manufacturing		Transportation and public utilities		Wholesale trade	
	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
Kankakee	2.1408	2.0983	.0677	.1029	.9470	1.0042	1.2297	1.0819	.7114	.6778	.6938	.5687
Kendall	1.4063	1.3784	0	0	.3516	.3728	2.9244	2.5730	.2301	.2193	.2292	.1879
Knox	3.2615	3.1967	0	0	.7020	.7444	1.3836	1.2174	1.2812	1.2208	.7030	.5763
Lake	.2159	.2116	.5223	.7940	1.0967	1.1631	1.1995	1.0554	.4590	.4374	.7994	.6553
LaSalle	3.0638	3.0030	1.1807	1.7951	.7943	.8423	1.5905	1.3994	.8932	.8510	.8097	.6637
Lawrence	3.9218	3.8440	9.4058	14.2999	.8814	.9347	.9714	.8547	.7035	.6703	.8352	.6847
Lee	4.8880	4.7909	.4081	.6204	.5817	.6169	.7295	.6418	.9760	.9299	.7817	.6408
Livingston	13.9654	13.6881	1.5013	2.2824	.9435	1.0005	.5965	.5249	.4498	.4286	.8376	.6866
Logan	8.4790	8.3106	.1283	.1951	.5315	.5636	.7490	.6590	.6076	.5789	.7695	.6308
McDonough	8.7479	8.5742	.2760	.4196	.5036	.5369	.7335	.6453	.5739	.5468	.9321	.7641
McHenry	.3359	.3293	.3006	.4571	1.5696	1.6645	1.6067	1.4136	.5802	.5528	.5348	.4384
McLean	4.4998	4.4104	.0583	.0887	.7537	.7992	.5685	.5002	1.1408	1.0869	.7915	.6488
Macon	1.7766	1.7414	.1637	.2489	0	0	1.5489	1.3627	1.3150	1.2530	.5625	.4611
Macoupin	5.3141	5.2086	0	0	1.1079	1.1749	.3521	.3098	1.0217	.9734	1.1800	.9673
Madison	.3832	.3756	.2065	.3140	.9648	1.0232	1.7861	1.5714	1.0141	.9662	.4545	.3725
Marion	2.3084	2.2626	3.7561	5.7105	1.2419	1.3170	.8135	.7157	1.7548	1.6720	1.0978	.8999
Marshall	9.9281	9.7310	0	0	1.2050	1.2778	.9650	.8490	.6741	.6423	.9834	.8061
Mason	12.6389	12.3880	0	0	.7102	.7532	.6846	.6024	.4150	.4065	.7906	.7533
Massac	1.2371	1.2125	0	0	.8846	.9381	1.1099	.9766	3.2639	3.1099	.2950	.2418
Menard	19.6507	19.2606	.3043	.4627	.8018	.8503	.2679	.2357	.7826	.7457	.7695	.6308
Mercer	14.2493	13.9664	0	0	.7820	.8293	.1318	.1159	.9664	.9208	1.1903	.9757
Monroe	12.6195	12.3689	0	0	2.3618	2.5046	.0890	.0783	.6149	.5859	1.0504	.8611
Montgomery	7.3416	7.1959	0	0	.7820	.8293	.7280	.6405	1.2181	1.1606	.7030	.5763
Morgan	6.9121	6.7748	.0571	.0868	.8616	.9137	.7838	.6896	.9773	.9312	.6463	.5298
Moultrie	17.5880	17.2388	0	0	.8157	.8650	.2940	.2587	.4654	.4434	1.5259	1.2508
Ogle	.9034	.8855	.2730	.4151	1.2452	1.3205	1.7354	1.5269	.4283	.4081	1.1234	.9209
Peoria	.5359	.5253	.3405	.5177	1.3809	1.4644	1.2256	1.0783	.7727	.7362	1.1490	.9419
Perry	3.9121	3.8344	0	0	.7776	.8246	.7632	.6715	.4325	.4121	.2188	.1794
Piatt	19.9903	19.5934	.1472	.2238	.5578	.5916	.3004	.2643	.6426	.6123	.7950	.6517
Pike	11.8453	11.6101	.5656	.8598	1.0474	1.1108	.3234	.2846	1.0373	.9884	0	0
Pope	9.0922	8.9117	0	0	0	0	.0394	.0347	0	0	.4325	.3545
Pulaski	7.0437	6.9039	0	0	.4556	.4832	.4013	.3531	.8214	.7827	.2792	.2288
Putnam	7.9178	7.7606	0	0	0	0	2.0788	1.8290	0	0	.6509	.5336
Randolph	3.3111	3.2453	6.9670	10.5921	.8950	.9491	1.1822	1.0401	1.4042	1.3379	.3790	.3107
Richland	2.2250	2.1809	11.6006	17.6368	.4483	.4755	.9559	.8410	1.0061	.9586	.7024	.5758
Rock Island	.2372	.2325	.1632	.2482	.7206	.7642	1.6453	1.4476	.8025	.7646	.8884	.7282
St. Clair	.8521	.8352	0	0	1.3240	1.4041	.6354	.5591	1.5018	1.4310	0	0
Saline	1.2333	1.2088	12.0284	18.2872	.7794	.8265	.1365	.1201	1.4105	1.3440	.9236	.7571
Sangamon	1.7916	1.7560	.1713	.2605	0	0	.4455	.3920	0	0	.8919	.7311
Schuyler	12.6749	12.4232	4.0185	6.1095	.8075	.8564	.1629	.1433	.3317	.3160	1.1544	.9463
Scott	13.0154	12.7570	0	0	5.9980	6.3607	.0999	.0879	.8529	.8126	.6852	.5617
Shelby	16.4316	16.1054	0	0	1.0083	1.0692	.3191	.2808	.8647	.8239	.7501	.6149
Stark	20.7338	20.3221	0	0	.2910	.3086	.2595	.2283	.1417	.1350	1.4528	1.1904
Stephenson	.9444	.9257	0	0	.8319	.8822	1.7360	1.5274	.5079	.4839	.6202	.5084
Tazewell	1.5111	1.4811	.0064	.0098	1.2285	1.3028	2.3931	2.1055	.6079	.5792	.5125	.4201
Union	1.6347	1.6023	.7627	1.1596	.6610	.7010	.8775	.7721	.7701	.7337	.3737	.3063
Vermilion	3.4273	3.3593	.1824	.2773	1.1111	1.1783	1.5182	1.3358	.9638	.9183	.6042	.4953
Wabash	2.5183	2.4683	19.9715	30.3633	1.1913	1.2633	.8872	.7806	.5778	.5505	.4772	.3912
Warren	13.4984	13.2304	0	0	.4486	.4757	.5333	.4692	.6259	.5963	.8437	.6916
Washington	14.9757	14.6784	1.6405	2.4940	.6312	.6694	.4024	.3540	.7804	.7435	1.2574	1.0307
Wayne	4.6169	4.5252	9.2716	14.0929	.7495	.7948	.8647	.7608	.9145	.8714	.8967	.7351
White	6.0166	5.8971	15.8110	24.0379	.6037	.6402	.1517	.1333	.8182	.7796	.8756	.7177
Whiteside	.9513	.9325	.1087	.1653	.6633	.7034	2.1460	1.8881	.4481	.4269	.5860	.4804
Will	.5799	.5684	.5072	.7711	1.2831	1.3607	1.2827	1.1285	1.7238	1.6425	.5887	.4826
Williamson	.2477	.2427	7.5738	11.5147	2.0641	2.1890	.7994	.7034	1.3819	1.3167	.8293	.6798
Winnebago	.1791	.1755	0	0	.7780	.8250	1.8778	1.6522	.7558	.7201	.8780	.7198
Woodford	9.6909	9.4985	.1139	.1731	1.1759	1.2470	.6461	.5684	.6565	.6255	1.2200	1.0001

Source: Bureau of Economic Analysis.

0 – Not shown to avoid disclosure of confidential information.

Retail trade		Finance, insurance, real estate		Services		Agr. services, forestry, fisheries, and other		Government					
								Federal, civilian		Federal military		State and local	
US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
.9699	1.0267	.4513	.4149	.8808	.9076	.6870	1.2311	.2136	.3644	.0841	.1866	1.6679	1.8738
.3741	.3960	.2303	.2188	.2511	.2587	0	0	.0578	.0986	.0579	.1285	.4180	.4696
.9487	1.0042	.4884	.4490	.6505	.6703	0	0	.2188	.3732	.0761	.1688	1.0158	1.1412
.9460	1.0014	.5261	.4837	.9545	.9836	1.1649	2.0875	1.2027	2.0515	6.5660	14.5731	.6510	.7314
.9541	1.0100	.5259	.4825	.6761	.6968	.6299	1.1288	.1916	.3268	.0795	.1766	.6792	.7631
.6425	.6801	1.1992	1.1024	.6340	.6533	0	0	.2247	.3833	.1023	.2269	.8922	1.0024
.7375	.7807	.5621	.5168	.7048	.7263	1.5262	2.7350	.3011	.5135	.0977	.2169	2.5499	2.8647
.7536	.7977	.5409	.4993	.5962	.6144	1.3951	2.5000	.1133	.1933	.0808	.1794	1.2679	1.4244
.9119	.9653	.4621	.4249	.7030	.7245	1.1962	2.1436	.1445	.2465	.0814	.1808	2.0768	2.3331
1.1516	1.2191	.6269	.5763	.5705	.5879	.9882	1.7709	.2383	.4065	.1283	.2848	1.8453	2.0730
1.0455	1.1068	.7615	.7001	.8353	.8608	2.1468	3.8471	.1693	.2888	.1028	.2282	.7863	.8833
.9838	1.0414	3.5597	3.2726	.8412	.8669	1.3427	2.4061	.2252	.3841	.0828	.1838	.9856	1.1073
.9280	.9823	.6738	.6194	0	0	.4063	.7281	.2179	.3717	.0698	.1548	.5747	.6456
1.1079	1.1728	.6851	.6298	0	0	1.9064	3.4164	.2869	.4893	.1378	.3059	1.0763	1.2091
.9361	.9909	.6231	.5728	.6744	.6949	.4088	.7325	.2738	.4671	.1582	.3511	.8638	.9704
1.0772	1.1403	.5305	.4877	.8604	.8867	.4058	.7271	.3529	.6019	.0991	.2199	.8604	.9666
.8350	.8839	.6019	.5534	0	0	0	0	.1880	.3207	.1239	.2749	.8757	.9838
1.2764	1.0464	.6425	.5907	.4094	.4219	0	0	.1898	.3238	.1194	.2650	1.1265	1.2656
.8184	.8664	.4087	.3757	.5935	.6116	.9191	1.6470	.3141	.5358	.1169	.2595	1.2325	1.3846
.7650	.8098	.4936	.4537	.4872	.5021	2.0379	3.6519	.1796	.3063	.1109	.2461	1.0841	1.2179
.9415	.9906	.5575	.5125	.6633	.6835	2.8916	5.1819	.5200	.8869	.1792	.3977	1.5457	1.7364
1.2000	1.2703	.7930	.7290	.6749	.6955	0	0	.2439	.4160	.2316	.5139	1.1080	1.2448
1.1332	1.1996	.5000	.4597	0	0	.7931	1.4213	.3281	.5597	.0999	.2218	.6855	.7702
.8712	.9222	.6731	.6188	.8035	.8280	1.0049	1.8009	.1381	.2356	.0674	.1497	1.7646	1.9824
.9861	1.0438	.4474	.4113	.7126	.7344	1.8258	3.2719	.1677	.2860	.0950	.2108	.7423	.8340
.9112	.9646	.5286	.4860	.5246	.5406	1.4335	2.5688	.2362	.4028	.1016	.2256	.9976	1.1207
1.0003	1.0589	.9179	.8429	1.0776	1.1105	1.0911	1.9553	.5184	.8842	.0783	.1737	.7558	.8491
.7243	.7668	.2574	.2366	0	0	.2365	.4238	.1199	.2045	.0752	.1669	.7880	.8853
.7596	.8041	.4477	.4116	.6694	.6898	.9561	1.7134	.1570	.2678	.0936	.2078	.9757	1.0961
1.1530	1.2205	.5906	.5430	.6776	.6983	0	0	.3619	.6174	.1636	.3630	1.0881	1.2224
.9400	.9950	.4708	.4328	0	0	6.6491	11.9154	4.3103	7.3524	.2456	.5452	1.9047	2.1398
.8629	.9134	.3282	.3017	1.6003	1.6491	0	0	.5840	.9962	.1693	.3758	1.8953	2.1292
.2673	.2829	.2557	.2351	.2780	.2865	.5407	.9690	.0561	.0958	.0545	.1210	.5628	.6323
.7792	.8248	.3899	.3584	.4141	.4267	.3912	.7011	.1633	.2785	.0865	.1919	1.2635	1.4194
.9606	1.0168	.3915	.3599	.5970	.6152	.8000	1.4336	.2656	.4530	.1123	.2492	1.1934	1.3407
.8251	.8734	.6313	.5804	.5696	.5869	.3051	.5467	2.4826	4.2347	.1943	.4312	.6826	.7668
1.0407	1.1017	.6913	.6355	.9846	1.0146	.4077	.7306	1.5612	2.6630	4.1765	9.2696	.9315	1.0464
1.1786	1.2476	.6750	.6206	.9509	.9799	5.7995	10.3928	.4823	.8226	.1207	.2678	1.5610	1.7537
.9830	1.0406	1.4106	1.2969	1.0761	1.1089	.4560	.8171	.9163	1.5630	.0686	.1522	1.9516	2.1924
1.1242	1.1900	.3595	.3305	.6730	.6936	9.3920	16.8309	.3288	.5608	.1357	.3011	1.4493	1.6282
.6178	.6539	.3674	.3378	.2015	.2076	0	0	.1374	.2343	.0911	.2022	.6827	.7669
.8902	.9423	.4664	.4287	.5893	.6072	0	0	.3044	.5192	.1451	.3220	1.0857	1.2197
.5486	.5808	.4627	.4254	0	0	1.5427	2.7645	.1994	.3402	.1154	.2561	.9576	1.0757
.8208	.8689	1.6519	1.5186	.7194	.7413	.9547	1.7109	.1687	.2877	.0819	.1817	.7693	.8643
.5882	.6226	.4484	.4122	.3058	.3151	.2650	.4749	.0644	.1099	.0617	.1370	.3925	.4409
.6206	.6570	.3293	.3028	.5042	.5196	.5871	1.0521	.4300	.7335	.1218	.2703	3.6269	4.0745
.8056	.8537	.4745	.4362	.6864	.7073	.5015	.8987	1.1620	1.9821	.0935	.2075	.6070	.6819
.5856	.6199	0	0	.5057	.5211	0	0	.1182	.2016	.0644	.1430	.6881	.7730
1.5181	1.6070	.5414	.4977	.7791	.8028	0	0	.2176	.3712	.1044	.2317	.8416	.9455
.9199	.9738	.5168	.4751	.7008	.7221	1.6535	2.9631	.2747	.4685	.1478	.3280	.8324	.9351
1.0995	1.1639	.3982	.3661	.6523	.6722	1.3819	2.4764	.2195	.3744	.1056	.2344	.8298	.9322
1.4444	1.2115	.5679	.5221	.6929	.7141	1.4996	2.6873	.3745	.6389	.1118	.2481	1.2144	1.3643
.9186	.9724	.4341	.3990	.4471	.4607	.6897	1.2360	.1922	.3278	.0847	.1880	.8632	.9698
1.0603	1.1224	.4892	.4497	.7756	.7992	.6683	1.1976	.1737	.2962	.1113	.2470	1.0724	1.2048
1.0239	1.0838	.4395	.4041	.5723	.5898	.5717	1.0246	1.4909	2.5432	.1117	.2479	.8406	.9443
.8595	.9098	.6123	.5629	.7807	.8045	0	0	.2430	.4145	.0676	.1499	.6705	.7533
1.4044	1.4867	.5772	.5307	.6961	.7173	2.0195	3.6190	.1438	.2454	.1467	.3255	.9215	1.0353

Stock Options: Characteristics and Uses

JOHN E. GILSTER, JR.

In 1972 there were no organized exchanges for trading stock options. The option exchanges (started in 1973) now trade an options volume greater than the common stock volume of the American Stock Exchange and all regional exchanges combined. On several occasions daily trading has exceeded the share volume of the New York Stock Exchange itself.

One reason for this growth is obvious to anyone who has ever traded options. They are one of the world's most exciting investments. On 31 March 1978 the Dow Jones Industrial Average rose 1.6 percent; the average (call) option rose 16 percent. On 16 October 1978 the Dow Jones Industrial went down 6 percent; the average (call) option went down 31 percent (in a single day!). Many investors consider common stock exciting. Options multiply this excitement many times over.

Option Mechanics

An option is a side bet between investors over the future price of a common stock. The "writer" of a call option sells the purchaser of the option the right to buy a stated number of shares of stock at a stated price at any time prior to a specified expiration date. For example, if General Motors common stock is selling for $54 a share, an option to purchase it for $50 at any time before August might sell for $7 (this option would be called a "GM August 50"). The option is valuable because it entitles its owner to buy stock at a bargain price (that is, $54 GM stock can be bought for $50). Ironically an option usually sells for more than its immediate conversion value (the GM option would only save the investor $4 on a stock purchase, yet it sells for $7). The amount by which the option's price ("premium") exceeds its immediate conversion value ("tangible value") is called the "time premium." Time premiums exist because the underlying stock might go up substantially before the option expires. For example, if GM stock were to rise to $70 a share, the conversion value of the option just described would increase to $20 (a $70 stock could be bought for $50), a substantial gain on a $7 investment. Time premiums tend to decrease as the option expiration date approaches. The shorter the time to expiration, the less time remains for the stock to make a large profitable price movement. On the expiration date the time premium disappears completely and the option sells for its exact conversion value.

Spectacular gains usually involve spectacular risks. Options are no exception. For example, if GM stock were to drop to $50 a share or lower (an 8 percent decrease) the conversion value of the GM August 50 just described would be zero. If an investor holds the option to expiration and GM stock remains below $50 a share, the investor will lose his entire investment (what would you pay someone for a piece of paper that lets you buy a $50 stock for $50 and expires immediately?).

A study published by Fischer Black and M. S. Scholes ("The Valuation of Option Contracts and a Test of Market Efficiency," *Journal of Finance*, Vol. 27 (May 1972), pp. 399–417) suggests that call options offer a very high average rate of return. Unfortunately, this high average rate of return is the average of tremendous gains and terrible losses. The risk of this type of investment is so great that I have estimated that if an investor continually invests all of his resources in call options, he is certain to go completely broke eventually. Some particularly aggressive investors may wish to invest a maximum of 20 percent of their portfolios in options. This limited option investment reduces the risk of total bankruptcy while permitting the investor to enjoy some of the high *average* returns call options offer.

A call option is a side bet between the option seller ("writer") and the option buyer. If the option buyer enjoys high average returns, the option writer must suffer high average losses (that is, the writer is the source of the buyer's gains). If the buyer suffers high risks due to the extreme uncertainty of the outcome of his investment, the writer must also suffer high risks of uncertain outcomes (the writer's risk is the mirror image of the buyer's risk).

With high risks and negative returns, why would anyone write call options? The answer lies in the very special nature of the risk. The buyer of an option benefits from increases in stock price. The writer benefits from decreases. If options are written on stocks already held by the writer, the stock risk and the option-writing risk partly offset each other to produce a combined investment which is generally lower in risk than the stock alone. Black and Scholes have indicated that the average return of this combination is also lower than the average stock return but this lower risk and return may be attractive to some investors.

The actual mechanics of the option writing/common stock combination can be illustrated using the GM example. The option writer was paid $7 for his GM August 50. The option buyer then has the right to give the option writer $50 for a share of stock at any time prior to expiration. If the option is exercised, the writer gets a total of $57 ($7 for the original option and $50 when exercised) no matter how high the stock may have gone. The option writer will regret having written the option if it is exercised when the stock is above $57. However, even if the stock has risen to $200 the option writer still gets his $57 (total) for a stock originally worth only $54. He is worse off only in the sense that he would have made even more had he not written the option.

The option will only be exercised when the stock is above $50. If the option is not exercised prior to its expiration and the stock is below $50 on that date, the

option expires worthless. The option writer gets to keep his stock and the $7 paid him for the option.

A call option is the option to *purchase* stock at a specific price. Another type of investment available to investors in the "put" option. A put entitles its owner to *sell* stock at a specific price at any time prior to a specified expiration date. Therefore, much of the preceding discussion of call options is applicable in reverse to put options. Call owners hope for good news; put owners pray for disaster.

Option-Pricing Theory

In equilibrium an option cannot sell for less than its immediate conversion value (otherwise it would be converted) and it cannot sell for more than the value of the underlying stock (if the option sells for the same amount as the stock, why buy the option? The stock never expires and probably pays dividends). In the GM August 50 example, these principles limit the price of the option to a price between $4 and $50, which is not very helpful. Yet for many years this was about all that could be said with confidence about option pricing.

In a 1973 *Journal of Political Economy* article ("The Pricing of Options and Corporate Liabilities," Vol. 81 (May–June 1973), pp. 637–54), Black and Scholes created an elegant mathematical model of option pricing. The model requires the creation of a risk-free hedge by buying common stock and writing options on that stock. The proportions of stock and option investments must be such that a slight movement in the stock will be exactly offset by a slight opposite movement in the option writer's position. (An option's price movement is usually less than the stock's price movement. The strategy will generally require more option writing than stock purchases to achieve perfect balance.) After each tiny price movement the relative weighting of options and stocks will be changed (if necessary) so that the next tiny movement can be perfectly offset. This is done continually until the option expires. The strategy is designed to be riskless (all movements are perfectly offset) and will therefore yield the rate of return appropriate to riskless investments (that is, the Treasury bill rate).

Black and Scholes use differential equations to describe this continuous rebalancing strategy. They assume stock returns can be described as "white noise" (totally random movements — like the motion of subatomic particles) and solve their differential equation by applying the heat transfer equation of thermodynamics. This procedure yields a theoretical price for options.

Although Black and Scholes's derivation is extremely complex, the option-pricing equation they derive is relatively easy to calculate and use. The model offers some surprising conclusions. For example, according to the Black-Scholes equation, the value of an option is totally unrelated to the average rate of return predicted for the stock. Other things being equal, a stock which is expected to double will have the same option price as a stock expected to drop in half! Perhaps this is correct. I admit to serious doubts.

Option-Trading Techniques

By themselves options are usually a risky investment. In combination with other securities they can be used to reduce risk. For example, a combination of an option and a savings account (or better yet, a Treasury bill) can be used as an alternative to common stock investment. Instead of paying $54 for the GM stock already described, an investor might pay $7 for the GM August 50 option and put the remaining $47 into a savings account. If GM stock rises to $65 the option's conversion value will rise to $15 (the option may sell for more prior to expiration) and the savings account/option combination will be worth at least $15 + $47 = $62. The combination investment would have done almost as well as the direct stock investment. On the other hand, if GM stock drops to $35 a share on the option's expiration date, the option will expire worthless but the savings account will still be worth $47 plus interest. The investor has been sheltered from most of the losses suffered by common stock owners.

Options may also be helpful when an investor expects a substantial stock price movement but is unsure of the direction of the movement. In this case he could buy a put (a bet that the stock will go down) and a call (a bet that the stock will go up) on the same stock. If the stock moves substantially the investor stands to lose money on one of the two options and make money on the other. If the movement is large enough the profits will far exceed the losses. Unfortunately, if the stock price does not move, the investor stands to lose money on both options as the time premiums he paid on the options disappear as the expiration date nears.

A more complex strategy (called a "spread") involves buying a call and writing a call on the same stock. In the GM example the investor might write a GM August 55 and receive $4 and buy a GM August 50 for $7 (a cash outflow of $7 − $4 = $3). If GM is above $55 when the option expires the August 50 will be worth exactly $5 more than the August 55 (that is, there is no time premium at expiration and the "50" lets you buy the same stock $5 cheaper than the "55"). Netting this $5 inflow against his original $3 outflow gives a net profit of $2. The reader should note that the investor makes exactly $2 for any stock price above $55 (that is, he makes $2 if the stock is at $55 or $555!).

Unfortunately, if the stock price is below $50 on expiration both options expire worthless and there is no final cash inflow to offset the original $3 outflow — the investor loses his entire investment. This particular spread is called a bull spread because its success depends on a reasonably prosperous (bullish) stock market.

The investor could have created a bear spread and profited from a declining (bearish) stock market by reversing the option buying and writing positions already described. He would buy the August 55 for $4 and write the August 50 for $7 for a cash inflow of $3. If the stock stays below $50 both options expire worthless and the investor keeps his $3 profit. This investor is in trouble if the stock goes up. (Continued on next page.)

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(Continued from p. 11.)

Summary

The trading of options in their present form is relatively new but the market has already enjoyed considerable success. The interest in options is probably due to their high-risk/high-return nature and to the fact that they can be used in combination with each other and other types of securities to produce an almost limitless variety of risk and return combinations.

1977 Income and Employment Data Available

Detailed BEA income and employment data are available for each of the 102 counties and 10 SMSAs of Illinois for 1971 through 1977. Those interested in obtaining the data may write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801. A charge will be made to cover costs.

Illinois Business Indexes

Item	April 1979	March 1979	April 1978
Leading indicator (1969=100)	95.2[a]	96.5[a]	97.2
Coincident indicator (1969=100)	160.5[a]	159.6[a]	150.9
Employment-manufacturing (in thousands)[1]	1,244[a]	1,242[a]	1,238
Weekly earnings-manufacturing[1]	$281[a]	$291[a]	$268
Consumer prices in Chicago (1967=100)[2]	208.7[a]	206.6	187.3
Ordinary life insurance sales (in millions)[3]	$1,462.2	$1,410.4	$1,261.5
Retail sales (in millions)[4]	$3,802[a,b]	$3,211[a,b]	$3,666[b]
Farm prices (1967=100)[5]	246	253	218
Coal production (in thousands)[6]	4,948	5,189	5,190
Petroleum production (in thousands)[7]	1,635	1,690	2,024
Building permits (in thousands)[4]			
Residential housing units	4.3	3.3	6.2
Value of residential housing	$178,204	$133,688	$237,028
Value of nonresidential housing			
Industrial buildings	$35,834	$26,218	$18,306
Office, banks, and professional buildings	$41,346	$44,915	$22,634
Stores and other mercantile buildings	$31,985	$23,029	$33,261
Other	$36,954	$56,710	$23,385
	1978:III	1978:II	1977:III
Personal income (in millions)	$98,292	$95,806	$86,920

[1]Ill. Dept. of Labor. [2]US Bureau of Labor Statistics. [3]Life Ins. Agcy. Manag. Assn. [4]US Dept. of Commerce. [5]Ill. Crop Rpts. [6]Ill. Dept. of Mines. [7]Ill. Geol. Survey.

[a]Preliminary. [b]Data for March 1979 compared with February 1979 and March 1978.

(Continued from p. 4.)

fying or specifying a manufacturer in any way. A 1974 study by a marketing research firm examined possible savings which could be obtained from generic prescribing of drugs. Generic prescribing is practical only for multisource or nonpatented drugs, which, at present, constitute about 25 percent of the dollar expenditure for all prescription drugs on the market. This study examined the effect of generic prescribing for the top multisource drugs (representing 87 percent of the expenditures for all multisource drugs) in 1973. It concluded that the overall savings for all prescriptions written outside of hospitals would be 1.69 percent, or less than 2 cents on each prescription dollar.

Major pharmaceutical firms in Illinois include Abbott Laboratories, Baxter Travenol Laboratories, Inolex Corporation, and G. D. Searle. SUSAN J. LINZ

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Regulation Q: The Crime of '66

EDWARD J. KANE

This presentation sounds a single theme, but a theme which has many variations: that the congressionally mandated system of deposit-rate ceilings at commercial banks, mutual savings banks, and S&Ls is a monstrous economic and political crime wave, monstrous because its principal victims are the nation's least fortunate citizens. The root crime was committed in 1966 when, as a "temporary" emergency measure to forestall a few S&L bankruptcies, Congress extended Regulation Q ceilings to thrift institutions. Although this system of comprehensive ceilings on deposit interest rates has been administered in ways that discriminate grossly against small savers, Congress has renewed it routinely. It is currently on the books through 1980.

This "Crime of 66" and its aftermath should disturb even the imperturbable conscience of a cultivated modern congressperson. The structure of these ceilings mocks our constitution's fundamental commitment to equal opportunity. It cynically permits vastly higher interest rates to be paid on sizable accumulations of funds.

Regulation Q ceilings tax the poor to finance "welfare" for the rest of us, equivalent in their distributional effects to a confiscatory federal tax that falls on the financial wealth of *small* savers only and whose proceeds are designated to subsidize homebuilders, homeowners, and inefficient depository institutions.

> This article is taken from testimony given on 20 March 1979 before the Subcommittee on Commerce, Consumer, and Monetary Affairs. Hearings by this subcommittee of the Committee on Government Operations of the US House of Representatives have been part of an overall review of congressionally mandated deposit-rate ceilings at commercial banks, savings and loan associations, and other thrift institutions.
>
> Edward J. Kane is Reese Professor of Banking and Monetary Economics at Ohio State University. In addition to other current responsibilities, he is a consultant for the Joint Economic Committee's Special Study on Economic Change and is president of the American Finance Association. Dr. Kane received his Ph.D. in economics at MIT in 1960.
>
> William R. Bryan

Differential Opportunities for Regulatory Escape in Financial Markets

Regulation Q ceilings victimize small savers disproportionately for several reasons. First, small savers are frozen out of securities markets by the structure of transactions costs. One of the main functions depository institutions perform is to intermediate securities denominations by pooling small individual deposits into amounts large enough to trade in fully diversified round lots of high-denomination instruments. The smaller the amount of funds a household controls, the fewer the alternative assets into which it can economically put its savings. Whether ceilings exist or not, small savers tend to hold a large proportion of their accumulated savings in "regulated financial assets," a term I use to designate assets (deposits and US savings bonds) whose yields are held down administratively as a result of deposit-rate ceilings.

However, sophisticated households with sizable amounts of savings can shop among a variety of assets. They can and do rearrange their financial-asset portfolios to lessen the burden that deposit-interest ceilings would otherwise place on them. Moreover, the longer the ceilings have remained in force, the more fully have financial markets and institutions been able to adapt to help them. The rapid growth of money-market mutual funds and credit unions — and the development of small-

denomination bonds by large issuers such as Sears — provide examples of this adaptation. Although such regulation-induced innovations reduce the burden of deposit-interest ceilings on large savers, they institutionalize imperfectly diversified patterns of intermediation that are economically less efficient than the ones they replace. This is a cost borne by society as a whole.

For small savers, possibilities for adapting their *financial* portfolios are severely limited and have been further compressed by government action to reduce disintermediation, notably the 1970 increase in the minimum denomination of US Treasury bills. Small savers lessen the burden of low ceiling rates of interest on regulated financial assets principally by reducing their saving. But cutting back their savings plans prevents them from improving their station in life and spreads the burden that this regulation places on their standard of living far into the future. These households will continue to bear the costs of the Regulation Q era long after it has faded into history.

Ceilings on thrift-institution deposit interest were not intended to shaft small savers and promote inefficient financial arrangements. They were adopted to protect the solvency of the nation's weakest S&Ls and savings banks against the effects of rapidly increasing market interest rates and to promote housing activity by assuring a continued flow of mortgage funds. But every regulation must be judged by its unintended effects as well as its intended ones.

Real Estate As an Opportunity for Escape

During the Regulation Q era, for most households the inflation-adjusted after-tax rate of return has been negative on the few *financial* assets their wealth permits them to buy. Even in the 20 percent tax bracket, a 5.25 percent return on passbook savings yields only 4.20 percent after taxes. In the 30 percent bracket, the after-tax yield falls to 3.68 percent. It is hard to remember when the rate of inflation in product prices did not exceed these low rates of return. This means that savings invested in these assets have less real value with each passing year.

In the absence of government-enforced ceilings on deposit interest rates, market forces would have pushed financial-institution deposit rates up at least enough to promise low-bracket depositors a small anticipated net yield. Given the Q ceilings are in place and that transactions costs keep small savers out of bond and stock markets, many households have found that real estate assets offer their accumulated savings the best protection against erosion in purchasing power. Real estate has been traditionally attractive to Americans and returns on real property have been taxed much more favorably than returns on financial assets. Federal tax treatment of a property's capital income is especially generous for owner-occupants. Real estate gained attractiveness under comprehensive deposit-rate ceilings because well-developed mortgage markets provided a convenient vehicle for small savers to leverage their modest savings enough to cover the purchase price of a residence or rental property.

Survey data depicting the composition of household assets indicate that in the face of unremitting inflation, deposit-rate ceilings have markedly changed the age distribution of real-estate ownership. This is shown in the table. Even as early as 1970 (unfortunately, this is the latest year for which representative household balance sheet data have been collected), households whose heads were less than 55 years in age had sharply increased the proportion of their accumulated savings held in real estate, while older households had shifted their funds out of both real estate and regulated financial assets into "unregulated financial assets" (stocks, marketable bonds, and mutual funds).

Although this point is not yet widely appreciated, small savers' efforts to protect their savings against the effects of unfair deposit-rate ceilings provide the motive force for the current speculative boom in housing. These ceilings have greatly contributed to secular inflation in housing costs and, by discouraging the flow of saving into strictly financial instruments, have also reduced the pool of savings available for new business investment. Even though Regulation Q is intended to help housing, authorities by no means meant to push it so assiduously and at such a high cost in macroeconomic destabilization.

Percentage Breakdown of Households' [illegible] and of Financial Assets and Real-Estate Equity by Age Class in [illegible] and 1970

(Proportions stated in percentage points)

Age of household head (in years)	Financial assets: [illegible]gulated	Financial assets: Unregulated	Financial assets: Total[1]	Real-estate equity: Total	Real-estate equity: Equity in home	Real-estate equity: Equity in investment real estate
[illegible] data set						
Under 25	19.5	57.4	76.9	23.2	8.8	14.4
[illegible]	[illegible]	[illegible]	31.1	68.9	[illegible]	20.8
[illegible]	[illegible]	20.2	[illegible]	66.8	[illegible]	16.6
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14.4
[illegible] to 64	[illegible]	[illegible]	[illegible]	[illegible]	47.1	17.6
[illegible]	[illegible]	12.8	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] respondents	18.1	17.9	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]						
[illegible]	[illegible]	8.7	53.5	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	8.1	[illegible]	[illegible]	[illegible]	18.9
[illegible]	[illegible]	[illegible]	[illegible]	73.2	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	37.4	[illegible]	[illegible]	[illegible]

[illegible] data tapes. [illegible] Schmitz[illegible] [illegible] Institute of [illegible]
[1] [illegible] not add to 100.0 because of rounding.

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Costs and Victims of Deposit-Rate Regulation

Costs imposed on households by deposit-rate regulation fall into two categories: (1) forgone interest on regulated assets actually held; and (2) distortions in the level of household saving and in its allocation among competing assets.

The value of deposit interest forgone by households has been assessed for scattered years or regions by several economists, but the most comprehensive figures are those of David H. Pyle ("Interest Rate Ceilings and Net Worth Losses by Savers" in Kenneth Boulding and Thomas Wilson, eds., *Redistribution Through the Financial System* (New York: Praeger, 1978), pp. 87–101). Pyle estimates that between 1968 and 1975 holders of savings accounts lost at least $22 billion. Although open-market interest rates did not greatly exceed ceiling rates on passbook savings in 1976 and the first half of 1977, since then the ceilings have misappropriated many more billions of dollars of household interest.

Even neglecting the forgone interest that accrued during 1976 and the first half of 1977, one can easily support an estimate of $20 billion in lost interest for the three years and three months that have passed since Pyle's period of estimation. In September 1978, roughly $425 billion were held in passbook savings accounts at commercial banks, savings banks, and S&Ls, with about another $610 billion in certificate accounts at these institutions. Using these totals as a base and assuming that, over the last 18 months, forgone interest averaged two percentage points on passbook accounts and one percentage point on certificates provides a relatively simple way to justify my $20 billion figure. One could conservatively add another $1 billion a year in interest that would have been paid on US savings bonds if the Treasury had not feared upsetting the Regulation Q applecart. Pulling these figures together produces a grand estimate of about $55 billion dollars in forgone interest. Because senior citizens (those over 65 years of age) hold a vastly disproportionate amount of total funds in savings accounts (35 percent of regulated assets in the 1970 survey), about $19 billion of these dollars were diverted from the old.

The second category of costs is much harder to evaluate. These must be viewed as "people costs" rather than mere dollar magnitudes. Households have been able to rearrange their portfolios to push their overall portfolio rate of return well above the 5-to-6 percent level available on regulated assets. Except for relatively high-income and older families, they have accomplished this principally by stepping up investments in real estate to counterbalance the low yields available to them on financial assets.

The big losers in the Regulation Q game are family units who do not own any real estate assets at all. Compared with other families, these households are drawn disproportionately from the ranks of the black, the female, the poor, and the young. In competing for mortgages, these groups are customarily disadvantaged. However, deposit-interest ceilings severely aggravate that disadvantage by driving up both the cost of housing and demands for mortgages among other groups, while reducing the disadvantaged sectors' ability to accumulate the wherewithal to make an acceptable down payment.

What Can Be Done to Lessen These Costs?

The regulatory effort to keep deposit rate ceilings in place is reminiscent of the final stages of our nation's involvement in the infamous Vietnam War. Federal authorities have focused their energies on a few enclaves of savings funds, while guerrilla action has moved more and more household wealth to areas beyond regulators' sphere of control. When the current extension of deposit-rate ceilings expires in December 1980, authorities should plan to accept a staged withdrawal.

In the meantime, much could be done to undo at least the grosser elements of discrimination against small savers that is inherent in the current regulatory structure. First, early withdrawal penalties applicable to certificate accounts could be lightened or (better) deregulated completely. Current penalties impose an excessively punitive forfeiture of promised interest, one that is unrelated to differential costs that early withdrawals actually impose on depository institutions. Households that cannot *confidently* put funds aside until a certificate's maturity date have more to lose than to gain from buying a certificate whose maturity matches the holding period planned for their savings.

Second, the discriminatory effect of early withdrawal penalties need not be heightened by restrictions to minimum denominations. These restrictions could be abandoned or at least relaxed to allow institutions to assist their customers to *pool* their funds into eligible amounts.

Third, the principle of variable-rate ceilings — so successful in the case of money-market certificates — could be extended to passbook accounts.

Fourth, almost no justification exists for regulating interest rates on intermediate and long-term certificates of deposit. Treasury officials could induce industry pressure against regulatory ceilings and minimum denominations for long CDs by offering US savings bonds at more competitive rates and maturities.

A Moral Perspective

In conclusion, let me emphasize that the issue is *not* whether homebuilding or thrift institutions should be subsidized. *Whether* to subsidize something and *how to finance* the resulting subsidy are separate issues. Deposit rate ceilings are far from the only way to help homebuilding and thrifts. The ceilings are merely the *sneakiest* way. They hide the subsidies from public view and leave the dollar magnitudes involved hard to evaluate.

The issue is, who should ultimately pay the freight for subsidizing S&Ls and housing, if indeed the government wants the subsidization to continue. The overriding question is whether our current *means* of helping the beneficiary industries — by a discriminatory system of deposit-rate ceilings — is morally defensible. How can we pretend that the end justifies the means?

Playing It in Peoria

The Illinois labor force distribution by major occupation approximates that of the aggregate US labor force. The same holds true for the relative job distribution in Peoria.

One measure of the degree of similarity is the employment location quotient shown in the following table. The employment location quotient for the State is derived by dividing the percentage of total Illinois wage and salary employment in an economic sector, for example, farming, by the percentage of total wage and salary employment which that sector constitutes in the US economy. A location quotient of .5538 means that the share of farm employment in Illinois is only about half that of the US. In most cases, the state employment location quotient is close to one. That is, the location of industry and jobs in Illinois parallels that of the US. The

1977 Employment By Type and Broad Industrial Sources -- Location Quotients

	Farm		Mining		Construction		Manufacturing		Transportation and public utilities		Wholesale trade	
	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
State	.5538	1.0000	.6553	1.0000	.8583	1.0000	1.1591	1.0000	1.0927	1.0000	1.2255	1.0000
Adams	.9452	1.7068	.6344	.9681	.6778	.7897	1.2396	1.0695	.9053	.8285	0	0
Alexander	1.7190	3.1042	.0000	.0000	.9378	1.0926	1.4152	1.2210	1.5322	1.4022	.8426	.6876
Bond	3.1604	5.7072	.3652	.5573	.4203	.4897	.6251	.5393	.7993	.7315	1.3173	1.0749
Boone	1.8137	3.2752	0	0	.6649	.7746	2.5239	2.1775	.7407	.6779	.4355	.3554
Brown	6.5584	11.8434	.0000	.0000	0	0	.0990	.0854	1.0440	.9554	1.3261	1.0821
Bureau	3.0978	5.5941	.3777	.5764	1.3016	1.5165	1.1712	1.0105	.6710	.6141	.9817	.8010
Calhoun	7.6423	13.8008	1.0149	1.5488	.5489	.6395	.0540	.0466	.4362	.3992	.8180	.6675
Carroll	3.4319	6.1975	0	0	.5085	.5925	.6008	.5183	2.2190	2.0308	.6207	.5065
Cass	3.3050	5.9682	.0000	.0000	.6665	.7765	1.2158	1.0489	0	0	1.0658	.8696
Champaign	.6877	1.2419	.0864	.1319	.8249	.9611	.3722	.3211	.6147	.5625	.7230	.5900
Christian	4.6461	8.3901	9.2037	14.0454	.6440	.7503	.7732	.6671	;9993	.9145	1.2985	1.0596
Clark	3.8637	6.9773	8.2411	12.5764	.6935	.8080	.7961	.6868	1.1714	1.0721	1.2636	1.0311
Clay	1.3636	2.4624	8.3331	12.7168	.6828	.7955	.9228	.7962	1.0204	.9339	1.0084	.8228
Clinton	2.2252	4.0184	0	0	1.1342	1.3215	.5102	.4402	1.0258	.9387	0	0
Coles	1.0820	1.9539	0	0	1.1007	1.2824	1.1628	1.0032	1.3472	1.2329	.7024	.5732
Cook	.0368	.0664	.1480	.2258	.7518	.8759	1.1797	1.0178	1.2334	1.1287	1.5027	1.2262
Crawford	1.3765	2.4857	5.0027	7.6344	1.4320	1.6684	1.6085	1.3878	.9332	.8540	1.0994	.8971
Cumberland	3.1910	5.7625	0	0	.2546	.2967	.8118	.7004	0	0	.6250	.5100
De Kalb	2.2956	4.1454	0	0	.6512	.7587	1.2273	1.0589	.5409	.4950	.9350	.7629
De Witt	2.7812	5.0224	.2173	.3317	0	0	.7474	.6449	2.1236	1.9434	1.4245	1.1623
Douglas	3.1054	5.6078	0	0	1.3050	1.5204	.9878	.8523	1.3912	1.2732	1.0392	.8479
Du Page	.3475	.6276	0	0	1.4736	1.7168	.8788	.7582	.8697	.7959	1.5946	1.3012
Edgar	4.6507	8.3984	0	0	.5099	.5941	1.4089	1.2156	0	0	1.1980	.9775
Edwards	3.2000	5.7787	0	0	.5500	.6407	2.0971	1.8093	.7478	.6844	1.2674	1.0342
Effingham	1.1467	2.0709	.5004	.7637	1.0267	1.1962	1.2291	1.0604	1.0410	.9527	1.2585	1.0269
Fayette	3.2172	5.8098	1.8348	2.8000	.7160	.8342	.8953	.7724	.8001	.7322	1.0182	.8309
Ford	4.6969	8.4819	.3760	.5738	1.0385	1.2099	.9454	.8156	.7518	.6881	1.4550	1.1873
Franklin	.8496	1.5342	25.1992	38.4557	.9814	1.1434	.2455	.2118	.8876	.8123	.6834	.5577
Fulton	2.0985	3.7896	13.1988	20.1422	.4937	.5752	.8702	.7508	.6897	.6312	.4941	.4031
Gallatin	4.9024	8.8530	32.9420	50.2717	.5925	.6904	.4722	.4074	.1907	.1746	1.1135	.9086
Green	7.6084	13.7397	0	0	.4409	.5137	.5328	.4596	1.5181	1.3893	1.2205	.9959
Grundy	1.1575	2.0903	0	0	1.3359	1.5564	1.2648	1.0912	2.0699	1.8943	.9602	.7835
Hamilton	5.5270	9.9810	1.3345	2.0365	.5671	.6607	.5862	.5058	.8529	.7805	.5916	.4827
Hancock	4.1587	7.5099	0	0	1.2062	1.4054	.4623	.3989	1.0223	.9356	1.0255	.8368
Hardin	.6892	1.2447	40.0610	61.1357	0	0	.0400	.0345	.9902	.9061	0	0
Henderson	12.6691	22.8784	.0000	.0000	.8925	1.0398	.0424	.0366	.6594	.6034	1.0827	.8835
Henry	2.4370	4.4008	0	0	1.7223	2.0066	.8319	.7177	1.0880	.9957	0	0
Iroquois	5.8859	10.6290	.1883	.2873	.7716	.8990	1.0806	.9323	.5195	.4755	1.4147	1.1543
Jackson	.9641	1.7410	1.7607	2.6869	.6884	.8021	.3156	.2723	.8858	.8106	.2540	.2073
Jasper	2.9133	5.2610	0	0	0	0	.8020	.6919	.5520	.5052	1.3618	1.1112
Jefferson	.7754	1.4003	16.9554	25.8750	1.0557	1.2300	.4977	.4294	1.0394	.9512	.8794	.7176
Jersey	4.5198	8.1620	.0000	.0000	.5819	.6779	.3982	.3436	.8100	.7413	.9614	.7845
Jo Daviess	3.4005	6.1409	0	0	.9245	1.0771	1.4178	1.2232	.6780	.6204	.8863	.7232
Johnson	4.2519	7.6783	0	0	.8525	.9933	.3477	.3000	0	0	1.5320	1.2501
Kane	.7018	1.2673	0	0	.7087	.8256	1.4224	1.2272	.5997	.5488	.7584	.6188

diverse state economy makes the Illinois labor force less susceptible to shocks of select industrial goods markets because production is not concentrated in a few industries.

Peoria has been popularly labeled as the heart of America. In terms of relative employment shares, this is indeed the case. Manufacturing, services, and retail trade are the major economic sectors in the Peoria SMSA as in the US economy. With the exception of farming, mining, and federal government, the employment location quotients are all close to one.

The employment location quotient can also be used to measure the relative importance of an economic sector. Manufacturing accounts for about 25 percent of the total wage and salary employment in Illinois. The location quotient for manufacturing in Coles County is 1.0032, indicating that a similar proportion of workers are employed in manufacturing in Coles County as in the State. The service sector represents about 18 percent of total employment in Illinois. A location quotient of .7461 implies that the service sector in Coles County accounts for somewhat less — approximately 13 percent.

Retail trade		Finance, insurance, real estate		Services		Agr. services, forestry, fisheries, and other		Government					
								Federal, civilian		Federal, military		State and local	
US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
.9852	1.0000	1.1259	1.0000	.9710	1.0000	.4950	1.0000	.6666	1.0000	.5672	1.0000	.9290	1.0000
1.0551	1.0710	.6111	.5427	0	0	.6446	1.3022	.2405	.3608	.2514	.4432	.8011	.8624
.9942	1.0091	0	0	0	0	0	0	.4404	.6606	.2915	.5139	1.1021	1.1864
1.0268	1.0423	0	0	1.5417	1.5876	0	0	.2451	.3677	.4425	.7802	1.2247	1.3184
.4847	.4920	.4212	.3741	.5018	.5168	0	0	.1150	.1725	.2464	.4344	.8076	.8694
1.0417	1.0574	1.3590	1.2070	0	0	0	0	.3784	.5676	.4554	.8029	1.7097	1.8404
.7973	.8093	.5610	.4983	.7649	.7877	1.5631	3.1575	.1776	.2663	.3221	.5680	1.5857	1.7070
1.0194	1.0348	.6393	.5678	1.0223	1.0528	.0000	.0000	.7698	1.1547	.4791	.8448	2.4592	2.6473
.8566	.8695	.5866	.5210	.6749	.6950	1.0427	2.1064	4.3743	6.5617	.4619	.8143	1.3408	1.4433
.9218	.9356	.5762	.5118	0	0	.5829	1.1776	.3418	.5127	.3126	.5512	1.4212	1.5299
1.1119	1.1286	.5741	.5099	.7793	.8025	.4036	.8153	1.3670	2.0506	4.3896	7.7394	2.0034	2.1566
.9002	.9137	.5934	.5271	.8983	.9251	.2097	.4237	.1985	.2978	.3293	.5806	1.1577	1.2462
.9379	.9520	.4559	.4049	.6586	.6783	0	0	.2797	.4196	.3526	.6218	1.5077	1.6230
.8752	.8884	.4717	.4190	.5126	.5279	1.0022	2.0245	.2272	.3409	.3866	.6816	1.9703	2.1210
1.0042	1.0193	.5566	.4943	1.0146	1.0448	.9515	1.9221	.1536	.2304	.3791	.6684	2.0884	2.2481
1.0269	1.0423	.5528	.4910	.7245	.7461	0	0	.1506	.2259	.2586	.4560	1.5895	1.7111
.9582	.9726	1.4354	1.2749	1.0513	1.0826	.3269	.6604	.6921	1.0382	.2337	.4121	.7326	.7886
.7566	.7680	.5441	.4832	.4726	.4867	.5464	1.1037	.1623	.2435	.2827	.4984	1.0867	1.1698
1.1144	1.1312	.4622	.4105	0	0	0	0	.1989	.2984	.4628	.8159	1.6401	1.7655
.9592	.9737	.5380	.4778	.5349	.5508	0	0	.1585	.2377	.2769	.4882	2.0495	2.2063
1.1866	1.2044	.6935	.6160	0	0	.6222	1.2568	.1751	.2626	.3612	.6368	1.5497	1.6682
.9741	.9888	.4458	.3959	0	0	.3657	.7388	.2145	.3217	.2787	.4914	1.1039	1.1884
1.3095	1.3292	.9499	.8437	1.1636	1.1983	0	0	.2559	.3839	.2800	.4936	.7636	.8220
.8052	.8174	.6090	.5409	.7390	.7611	0	0	.1679	.2519	.3705	.6533	1.2157	1.3086
.5279	.5359	0	0	.4362	.4493	0	0	.2606	.3910	.3286	.5793	.9035	.9726
1.1512	1.1686	.4547	.4038	.9828	1.0121	.3882	.7842	.3128	.4692	.2240	.3950	.9126	.9824
1.1392	1.1564	.4890	.4343	.5651	.5820	.4688	.9470	.4365	.6548	.3421	.6031	1.9204	2.0673
.7711	.7827	.6675	.5928	.8521	.8775	.5259	1.0623	.2277	.3416	.2809	.4952	1.5446	1.6627
.8532	.8661	.5957	.5291	.8230	.8476	0	0	.2787	.4181	.4407	.7771	1.6241	1.7483
.9314	.9454	.6127	.5442	.8393	.8643	.1767	.3569	.1764	.2647	.3559	.6275	1.5199	1.6361
.5772	.5859	.3178	.2823	.3310	.3409	1.6037	3.2394	.1630	.2445	.3017	.5320	1.6273	1.7523
.8916	.9050	.6582	.5846	.8018	.8257	0	0	.4662	.6993	.4527	.7982	1.6814	1.8100
1.2914	1.3108	.5913	.5252	.4859	.5004	0	0	.1836	.2754	.2789	.4917	.9876	1.0632
1.0108	1.0260	.7178	.6376	.5230	.5386	0	0	.7103	1.0655	.5545	.9776	2.3831	2.5653
.8425	.8552	.6852	.6086	1.0303	1.0610	0	0	.3023	.4534	.4267	.7523	1.9763	2.1274
.5063	.5139	.2905	.2580	.8478	.8731	0	0	.6645	.9968	.3860	.6806	1.6942	1.8237
.7313	.7424	.8187	.7272	.4976	.5124	2.2210	4.4864	.3542	.5313	.5767	1.0168	2.6911	2.8969
1.3116	1.3314	.6748	.5993	.7079	.7290	1.3833	2.7944	.2344	.3516	.3777	.6659	1.3598	1.4638
.8978	.9113	.6359	.5648	.7752	.7983	.5660	1.1433	.2007	.3010	.3757	.6623	1.3658	1.4703
1.2100	1.2282	.5688	.5052	.7847	.8081	.2375	.4798	.3973	.5959	.2383	.4201	2.9705	3.1977
.6678	.6778	.5284	.4693	0	0	0	0	.3024	.4535	.3418	.6026	1.2042	1.2963
1.0915	1.1079	.7311	.6493	1.0346	1.0655	.7544	1.5238	.2595	.3892	.2697	.4755	1.0421	1.1218
1.0882	1.1046	.5381	.4779	1.0523	1.0837	.5979	1.2078	.2295	.3442	.4971	.8764	2.1331	2.2962
.8460	.8588	.5872	.5215	.5945	.6122	0	0	.2206	.3309	.4181	.7371	1.4874	1.6012
.9790	.9937	.4050	.3597	.3571	.3677	0	0	.7833	1.1751	.5953	1.0497	2.6201	2.8205
1.0924	1.1088	.8218	.7299	.9703	.9992	0	0	.4352	.6528	.2477	.4367	1.0366	1.1159

1977 Employment By Type and Broad Industrial Sources -- Location Quotients (continued)

	Farm		Mining		Construction		Manufacturing		Transportation and public utilities		Wholesale trade	
	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
Kankakee	1.4140	2.5535	.0651	.0993	.7510	.8749	1.1270	.9723	.6625	.6063	.7703	.6286
Kendall	1.8098	3.2683	0	0	.3386	.3944	2.8999	2.5019	.2680	.2453	.3097	.2527
Knox	1.3223	2.3878	0	0	.6110	.7119	1.4405	1.2428	1.2993	1.1890	.8173	.6669
Lake	.4742	.8564	.4886	.7456	.9030	1.0521	1.1442	.9871	.4856	.4444	.6952	.5673
La Salle	1.2822	2.3155	1.5828	2.4154	.7453	.8684	1.5632	1.3487	1.0153	.9291	.8863	.7232
Lawrence	2.3042	4.1610	8.2086	12.5269	1.1880	1.3841	.7377	.6364	.6710	.6141	1.1212	.9149
Lee	1.4336	2.5888	.3704	.5652	.5201	.6060	.8109	.6996	.9334	.8542	.7657	.6248
Livingston	2.9595	5.3444	1.6559	2.5271	1.1427	1.3313	.8766	.7563	.6388	.5846	.9620	.7849
Logan	2.5234	4.5570	0	0	.6089	.7094	.8432	.7275	.6867	.6285	.8627	.7040
McDonough	1.9602	3.5398	.3863	.5895	.5173	.6027	.8212	.7085	.6182	.5657	1.1041	.9009
McHenry	2.2208	4.0103	.3216	.4907	1.2218	1.4235	1.7294	1.4921	.5490	.5024	.5132	.4188
McLean	1.5964	2.8828	.0296	.0452	.7245	.8441	.6361	.5488	1.1957	1.0943	.8927	.7284
Macon	.5070	.9156	.1140	.1740	0	0	1.4570	1.2571	1.4397	1.3175	.6755	.5512
Macoupin	3.1191	5.6326	0	0	1.1429	1.3316	.3963	.3419	1.0035	.9184	1.2413	1.0129
Madison	.4402	.7950	.2471	.3771	.8600	1.0020	1.5361	1.3253	1.1152	1.0206	.5234	.4271
Marion	.6952	1.2554	2.8665	4.3744	1.2307	1.4338	.9800	.8455	1.6937	1.5500	1.2126	.9895
Marshall	3.7630	6.7954	0	0	1.3210	1.5390	.9767	.8427	.7881	.7212	1.3284	1.0840
Mason	5.6883	10.2772	0	0	.8465	.9862	.7799	.6729	.8303	.7598	1.7051	1.3913
Massac	1.2022	2.1711	.0000	.0000	.6984	.8137	1.0956	.9452	2.7051	2.4756	.3286	.2681
Menard	8.1066	14.6394	0	0	.9075	1.0572	.4620	.3986	1.2161	1.1129	1.1099	.9057
Mercer	7.6076	13.7381	0	0	.7546	.8791	.1793	.1547	1.0667	.9762	1.2240	.9988
Monroe	6.8274	12.3292	0	0	2.2129	2.5782	.1221	.1053	.7434	.6803	1.4049	1.1480
Montgomery	1.7615	3.1810	0	0	.8704	1.0141	.9599	.8281	1.2639	1.1567	.8050	.6569
Morgan	1.8770	3.3895	0	0	.8139	.9482	.9020	.7782	1.0505	.9614	.7622	.6219
Moultrie	4.1021	7.4077	0	0	1.4238	1.6588	.5471	.4720	.7085	.6484	1.6038	1.3087
Ogle	4.1988	7.5825	.2626	.4008	.8495	.9898	1.7429	1.5037	.3986	.3648	1.1326	.9242
Peoria	.2037	.3679	.3263	.4979	1.2308	1.4339	1.0259	.8851	.8392	.7680	1.1980	.9775
Perry	1.2515	2.2600	0	0	1.0591	1.2340	1.1883	1.0253	.5371	.4915	.2533	.2067
Piatt	5.6957	10.2856	n.a.	n.a.	.9330	1.0870	.4246	.3663	1.0546	.9651	1.0512	.8577
Pike	9.4442	17.0547	.6438	.9824	1.1398	1.3280	.4506	.3888	.9205	.8424	0	0
Pope	10.3813	18.7470	0	0	0	0	n.a.	n.a.	0	0	.3823	.3120
Pulaski	1.8638	3.3657	0	0	.2215	.2580	.3224	.2781	.6648	.6084	.2200	.1795
Putnam	5.0766	9.1676	0	0	0	0	2.0754	1.7906	0	0	.8296	.6769
Randolph	1.4308	2.5838	5.9358	9.0584	.9439	1.0998	1.3135	1.1332	1.3793	1.2623	.4592	.3747
Richland	.8912	1.6094	6.5399	9.9803	.4832	.5630	1.3568	1.1706	1.0358	.9480	.8837	.7211
Rock Island	.1826	.3297	.1932	.2949	.6938	.8083	1.4248	1.2293	.8731	.7990	.9537	.7782
St. Clair	.2840	.5128	0	0	1.1308	1.3175	.5907	.5096	1.5022	1.3747	0	0
Saline	.6992	1.2626	10.2677	15.6691	.8053	.9382	.1831	.1580	1.3117	1.2005	.8504	.6939
Sangamon	.6551	1.1831	.1338	.2042	0	0	.4226	.3646	0	0	.8179	.6674
Schuyler	7.0119	12.6625	2.5927	3.9566	.9182	1.0697	.1830	.1579	.3594	.3289	1.2207	.9961
Scott	5.8056	10.4839	0	0	5.6756	6.6125	.2041	.1761	1.1212	1.0261	1.2192	.9948
Shelby	4.0250	7.2686	0	0	1.3096	1.5258	.5594	.4826	.9574	.8761	.8641	.7051
Stark	7.7808	14.0510	0	0	.5731	.6677	.5051	.4358	.2361	.2161	2.2663	1.8493
Stephenson	1.5771	2.8479	.0000	.0000	.7105	.8278	1.7684	1.5257	.5276	.4828	.5895	.4810
Tazewell	.4159	.7511	0	0	1.2960	1.5100	2.2840	1.9706	.8031	.7350	.6086	.4966
Union	2.9978	5.4136	.9837	1.5012	.4181	.4871	.9155	.7899	.6346	.5808	.3900	.3183
Vermilion	1.1992	2.1656	.2472	.3772	1.1813	1.3762	1.4560	1.2561	1.0990	1.0058	.6647	.5424
Wabash	1.1573	2.0900	18.4905	28.2177	1.2837	1.4956	1.1539	.9956	.6556	.6000	.6207	.5065
Warren	4.4977	8.1221	0	0	.4924	.5737	.6962	.6007	.7973	.7297	1.0874	.8873
Washington	4.9955	9.0212	1.8673	2.8497	.8141	.9485	.5145	.4439	.9809	.8977	1.4720	1.2011
Wayne	2.5935	4.6835	6.6598	10.1633	.8309	.9680	1.0259	.8851	.8452	.7735	1.2357	1.0083
White	2.6563	4.7969	15.0176	22.9178	.6307	.7348	.3280	.2830	1.0317	.9441	1.0974	.8955
Whiteside	1.2936	2.3450	.1801	.2748	.6327	.7372	1.8401	1.5876	.5327	.4875	.6405	.5226
Will	.4711	.8507	.6036	.9211	1.1941	1.3912	1.2007	1.0360	1.7051	1.5605	.6440	.5255
Williamson	.2241	.4047	6.6968	10.2197	1.9594	2.2829	1.0262	.8854	1.4065	1.2871	.9796	.7993
Winnebago	.1994	.3600	0	0	.6462	.7529	1.8617	1.6062	.7829	.7164	.9153	.7469
Woodford	6.0412	10.9094	0	0	1.0512	1.2248	.6644	.5732	.7807	.7145	1.1494	.9379

Source: Bureau of Economic Analysis.
0 - Not shown to avoid disclosure of confidential information. n.a. Not available.

Retail trade		Finance, insurance, real estate		Services		Agr. services, forestry, fisheries, and other		Government					
								Federal, civilian		Federal, military		State and local	
US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.	US	Ill.
.9338	.9479	.4769	.4236	.9662	.9950	.5098	1.0298	.2113	.3170	.2515	.4434	1.7534	1.8875
.4653	.4724	.2376	.2110	.4603	.4740	0	0	.0790	.1185	.2283	.4024	.6931	.7461
.9749	.9896	.5765	.5120	.6974	.7182	0	0	.2277	.3415	.2347	.4138	1.2791	1.3769
.9660	.9805	.4864	.4320	.8081	.8322	1.2666	2.5585	1.5648	2.3473	5.8151	10.2527	.6335	.6820
1.0790	1.0953	.5584	.4960	.7760	.7992	.3789	.7655	.2036	.3055	.2700	.4760	.8794	.9467
.6730	.6831	1.5502	1.3769	.9636	.9923	0	0	.2470	.3705	.3480	.6136	1.3569	1.4607
.7424	.7536	.5756	.5112	.7617	.7844	.5761	1.1638	.3012	.4518	.2844	.5014	2.6233	2.8239
.8532	.8661	.6547	.5815	.8393	.8644	1.0560	2.1331	.1439	.2158	.3207	.5655	1.8751	2.0185
.7746	.7862	.5342	.4744	.9903	1.0198	.4583	.9257	.1451	.2176	.2411	.4251	2.2218	2.3917
1.3245	1.3444	.6535	.5805	.6463	.6656	.4774	.9644	.2274	.3412	.3483	.6141	2.0347	2.1903
.9817	.9965	.6362	.5650	.7599	.7825	1.5810	3.1936	.1644	.2466	.3202	.5645	.8327	.8963
1.1431	1.1603	2.9857	2.6518	.9093	.9364	.9227	1.8638	.2400	.3600	.2541	.4480	1.1910	1.2821
1.0269	1.0424	.8349	.7416	0	0	.3170	.6404	.2424	.3636	.2328	.4105	.7419	.7987
.9484	.9627	.7204	.6398	0	0	.4087	.8255	.2876	.4314	.4153	.7323	1.5895	1.7110
.9669	.9814	.7320	.6501	.9193	.9467	.3833	.7744	.3227	.4840	.3567	.6289	.9865	1.0620
.9178	.9316	.5522	.4904	.9552	.9837	.2254	.4553	.3341	.5012	.2850	.5025	1.1548	1.2431
1.0810	1.0973	.6435	.5716	0	0	0	0	.2515	.3773	.4148	.7314	1.4307	1.5401
.9518	.9661	.8054	.7153	.5039	.5189	0	0	.2180	.3270	.3823	.6741	1.7854	1.9219
.7859	.7978	.3746	.3327	.7038	.7248	0	0	.2758	.4138	.3604	.6354	1.7696	1.9049
.7585	.7700	.7079	.6288	.6700	.6900	1.9403	3.9194	.2855	.4282	.4481	.7900	2.0930	2.2530
.9457	.9599	.5973	.5305	.5436	.5598	2.1280	4.2986	.6165	.9248	.5193	.9157	2.5827	2.7802
1.1625	1.1800	.8769	.7789	.9372	.9652	0	0	.2767	.4151	.6546	1.1541	1.4872	1.6010
1.2783	1.2976	.5406	.4801	0	0	.5712	.9519	.3647	.5471	.3083	.5436	1.0276	1.1062
.9284	.9424	.7423	.6593	.8695	.8955	.6821	1.3778	.1440	.2160	.2287	.4033	1.9536	2.1030
1.0692	1.0853	.4958	.4404	1.0697	1.1016	2.0516	4.1442	.2235	.3353	.4147	.7311	1.4600	1.5717
.7463	.7576	.4736	.4206	.5394	.5555	1.1932	2.4103	.2099	.3149	.2981	.5255	1.1668	1.2561
1.1693	1.1869	1.0540	.9362	1.2061	1.2421	1.0029	2.0258	.5179	.7769	.2203	.3885	.7738	.8329
.7717	.7833	.3608	.3204	0	0	0	0	.1368	.2052	.2974	.5243	1.1368	1.2238
.8733	.8869	.6738	.5984	.9857	1.0151	1.1774	2.3783	.2554	.3832	.3738	.6591	2.0101	2.1638
.9331	.9471	.5908	.5247	.8327	.8575	0	0	.3766	.5649	.4012	.7073	1.6060	1.7288
.5463	.5545	.4010	.3562	0	0	0	0	5.1194	7.6793	.8306	1.4645	2.1001	2.2607
.5042	.5117	.2443	.2170	2.6962	2.7766	0	0	.3534	.5301	.3093	.5453	1.4858	1.5994
.3758	.3814	.4351	.3864	.3007	.3097	0	0	0	0	.2882	.5081	1.3880	1.4941
..7019	.7125	.4918	.4368	.5997	.6176	.4770	.9635	.1853	.2779	.2941	.5185	1.6097	1.7328
.7682	.7797	.3252	.2889	.6386	.6577	.5470	1.1050	.2309	.3464	.2624	.4627	1.5974	1.7196
.9000	.9136	.7151	.6352	.6748	.6949	.2853	.5763	3.2270	4.8407	.3020	.5325	.9344	1.0058
1.0140	1.0293	.6848	.6083	1.1086	1.1416	.4188	.8460	1.7354	2.6032	3.1018	5.4689	.9593	1.0327
1.0192	1.0346	.7634	.6780	1.0796	1.1118	4.2344	8.5536	.4776	.7164	.3713	.6546	1.7957	1.9330
.9520	.9664	1.5095	1.3407	1.0982	1.1309	.4369	.8825	.7222	1.0833	.2024	.3569	1.9879	2.1399
1.0332	1.0488	.3940	.3499	.7788	.8021	1.5462	3.1233	.3730	.5595	.4114	.7254	2.4398	2.6264
.7427	.7539	.5449	.4840	.3570	.3677	0	0	.2456	.3685	.3801	.6701	1.7697	1.9050
.9995	1.0145	.5755	.5112	.7672	.7901	0	0	.3718	.5578	.5421	.9558	2.0542	2.2113
.6752	.6854	.7260	.6448	0	0	2.1007	4.2434	.3880	.5820	.4669	.8232	1.9563	2.1059
.7185	.7293	1.8627	1.6544	.7112	.7324	.4721	.9537	.1541	.2311	.2417	.4262	.9664	1.0403
.8095	.8217	.5583	.4959	.4568	.4705	.3748	.7570	.0893	.1339	.2462	.4341	.7198	.7749
.4685	.4756	.3147	.2795	.5077	.5228	0	0	.4171	.6257	.2749	.4846	3.2643	3.5140
.8991	.9127	.5502	.4887	.8721	.8981	.6977	1.4094	1.3382	2.0073	.2679	.4724	.8646	.9307
.7006	.7111	0	0	.6612	.6809	0	0	.1333	.1999	.2406	.4242	1.0936	1.1772
1.4151	1.4364	.6707	.5957	.9268	.9544	0	0	.2564	.3847	.3422	.6034	1.4118	1.5197
.8014	.8135	.7045	.6257	1.0437	1.0749	0	0	.3891	.5836	.4793	.8451	1.6847	1.8135
.9861	1.0009	.4754	.4222	.7420	.7642	.9577	1.9346	.2168	.3252	.3314	.5843	1.3010	1.4005
1.1198	1.1366	.6058	.5381	.6934	.7141	0	0	.3951	.5927	.3528	.6220	1.7305	1.8629
.9731	.9877	.4529	.4023	.6668	.6867	.4909	.9915	.2139	.3208	.2829	.4988	1.1388	1.2258
1.0704	1.0866	.5598	.4972	.8520	.8774	.7585	1.5323	.1949	.2924	.3863	.6810	1.1665	1.2557
.9566	.9710	.4766	.4233	.6105	.6287	.4162	.8407	1.3943	2.0915	.3259	.5746	1.0476	1.1277
1.0376	1.0532	.6472	.5748	.8269	.8515	0	0	.2565	.3848	.2359	.4159	.6656	.7165
1.1874	1.2053	.4984	.4427	.8748	.9009	.5931	1.1980	.1626	.2438	.4441	.7830	1.5108	1.6263

Local Illinois Developments

Employment

Total employment in Illinois increased a modest 1.2 percent from March of 1978 through March of 1979. The unemployment rate also showed improvement as it dropped to a 6.0 percent rate in March, down from the 6.7 percent level a year ago. The rate of unemployment in Illinois is still slightly above the nation's 5.8 percent rate.

Statewide, the Champaign-Urbana-Rantoul area showed the greatest increase in total employment. During the past year, total employment in the area increased by 4.7 percent while the unemployment rate in the area dropped from 5.7 percent to a healthy 4.7 percent rate.

The Bloomington-Normal and Springfield areas showed slight decreases in total employment over the past year. This was due to decreases in the total labor forces of the two areas, not to increases in unemployment. No area in Illinois has shown either an increased number of workers unemployed or an increased unemployment rate over the past year.

The Davenport-Rock Island-Moline area continues to have the lowest unemployment rate in the State. The current 4.4 percent rate is a substantial drop from the statewide low 5.5 percent rate the area maintained a year ago.

The 7.0 percent unemployment rate that the Decatur area registered in March proved to be the highest unemployment rate in the State. Though high, the area's current rate is 1.0 percent below the statewide high 8.0 percent level Decatur had a year ago.

Earnings

The state's production workers' average weekly earnings increased by 6.5 percent between 1977–78. This was down from the 8.0 percent increase in the 1976–77 period. Thus far in 1979, earnings are accelerating at over a 9 percent annual rate of increase. As of March average weekly earnings in Illinois stood at $291.14.

Throughout the State weekly earnings ranged from a high of $336.28 in the Springfield area to a low of $255.16 in the Champaign-Urbana-Rantoul area. The largest gains by production workers have taken place in the Bloomington-Normal area. Since 1977 average weekly earnings in this area have been increasing at over a 20 percent annual rate. This has been due both to substantial increases in hourly wages and hours worked per week. Earning increases throughout the State have stemmed basically from increased hourly wages, not increased hours worked per week.

Table 1. Labor Force, Employment, and Unemployment (in thousands)

Area	Labor force		Employment		Unemployment			
					Number		Percent of labor force	
	March 1978	March 1979	March 1978	March 1979	March 1978	March 1979	March 1978	March 1979
Illinois	5,222.9	5,249.1	4,873.4	4,933.9	349.5	315.2	6.7	6.0
Bloomington-Normal	58.9	58.6	55.7	55.6	3.2	3.0	5.5	5.2
Champaign-Urbana-Rantoul	76.9	79.7	72.5	75.9	4.4	3.8	5.7	4.7
Chicago	3,324.2	3,354.5	3,115.9	3,170.1	208.3	184.4	6.3	5.5
Davenport-Rock Island-Moline	177.9	179.4	168.1	171.5	9.8	7.9	5.5	4.4
Decatur	58.9	58.8	54.2	54.7	4.7	4.1	8.0	7.0
Peoria	170.7	173.5	160.8	163.3	9.9	10.2	5.8	5.9
Rockford	133.4	135.1	125.8	127.7	7.6	7.4	5.7	5.5
Springfield	95.5	93.9	88.9	87.4	6.6	6.5	7.0	6.9

Source: US Department of Labor.

Table 2. Gross Hours and Earnings of Production Workers on Manufacturing Payrolls

Area	Average weekly earnings				Average weekly hours				Average hourly earnings			
	1976	1977	1978	March 1979	1976	1977	1978	March 1979	1976	1977	1978	March 1979
Illinois	$236.11	$254.91	$271.42	$291.14	40.4	40.6	40.1	40.9	$5.85	$6.28	$6.76	$7.12
Bloomington-Normal	n.a.	192.02	234.46	269.11	n.a.	37.7	39.7	42.0	n.a.	5.10	5.90	6.41
Champaign-Urbana-Rantoul	n.a.	240.12	253.67	255.16	n.a.	39.7	38.8	38.6	n.a.	6.05	6.54	6.62
Chicago	241.92	258.92	268.97	282.92	40.7	41.5	40.9	40.8	5.94	6.24	6.58	6.94
Davenport-Rock Island-Moline	n.a.	271.57	277.27	323.67	n.a.	40.6	38.2	38.1	n.a.	6.69	7.25	8.49
Decatur	n.a.	275.01	302.10	328.45	n.a.	44.6	41.7	42.5	n.a.	6.17	7.24	7.74
Peoria	n.a.	287.52	317.44	328.25	n.a.	38.0	38.2	37.7	n.a.	7.66	8.31	8.72
Rockford	n.a.	253.95	282.70	297.49	n.a.	42.0	42.3	42.4	n.a.	6.05	6.68	7.01
Springfield	n.a.	294.24	306.86	336.28	n.a.	42.8	42.3	43.6	n.a.	6.88	7.25	7.72

Source: US Department of Labor.
n.a. Not available.

Comparative Economic Data for Selected Illinois Cities, May 1979

	Building Permits (000)		Electric Power Consumption (000,000 kwh)		Postal Receipts (000)	
	April 1979	Percentage Change from April 1978	April 1979	Percentage Change from April 1978	April 1979	Percentage Change from April 1978
ILLINOIS	$ 123,735[a]	+68.2	3,217.6[a]	+3.5	$ 50,656[a]	+2[illegible].5
NORTHERN ILLINOIS						
Chicago	$ 72,759	+233.8	1,553.2	+1.2	$ 39,273	+22.1
Aurora	2,830	-20.3	111.5	-1.2	639	+18.1
Elgin	941	-52.1	79.9	+6.3	653	+28.5
Joliet	3,265	-67.3	380.9	+8.6	358	+19.3
Kankakee	1,165	+155.4	67.9[b]	+3.3	305	+41.2
Rock Island-Moline	3,661	+77.8	114,6[c]	+10.8	1,172	+16.0
Rockford	3,971	-2.0	146.3	+6.8	934	+17.0
CENTRAL ILLINOIS						
Bloomington-Normal	4,816	-17.6	43.3	+7.7	$ 943	+15.7
Champaign-Urbana	3,686	-27.9	47.9	+9.3	661	-1.1
Danville	4,528	+48.7	41.8	+4.7	231	+8.4
Decatur	2,859	-1.3	124.1	+11.8	553	+25.9
Galesburg	1,134	-4.3	27.5[b]	-1.7	153	+8.5
Peoria	8,196	+7.1	186.1	+5.3	1,475	+20.3
Quincy	1,201	+48.2	38.9	+6.8	255	+23.1
Springfield	6,211	+50.6	104.1	-2.3	2,109	+15.1
SOUTHERN ILLINOIS						
East St. Louis	216	-30.3	21.6	-9.2	$ 174	+18.3
Alton	470	+98.3	74.9	+1.9	130	+19.2
Belleville	1,359	+90.8	21.4	+3.3	343	-16.1
Carbondale-Murphysboro	468	-20.2	31.7	+12.8	295	+2.0

[a]Total for cities listed. [b]Includes immediately surrounding territory. [c]Includes East Moline.

[illegible]

Item	[illegible]	April 1979	May 1978
[illegible]	[illegible]	98.5[a]	[illegible]
[illegible]	[illegible]	166.5[a]	[illegible]
[illegible] (in thousands)	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	$281.1	[illegible]
[illegible] (1967=100)	[illegible]	[illegible]	[illegible]
[illegible] (in millions)	[illegible]	$1,4[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]			
[illegible]	6.1	4.3	[illegible]
[illegible]	$243,011	$179,[illegible]	[illegible]
[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible] Life Ins. [illegible] Assn. [illegible] S Dept. of Commerce. [illegible] Dept. of Mines. [illegible] Survey.

[a]Preliminary. [b]Data for April [illegible] compared [illegible] March [illegible] and April [illegible].

1977 Income and Employment Data Available

Detailed BEA income and employment data are available for each of the 102 counties and 10 SMSAs of Illinois for 1971 through 1977. Those interested in obtaining the data may write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801. A charge of $20 will be made to cover costs.

A Disaggregation of Service Employment in Declining Metropolitan Areas

DAVID L. McKEE

No one would dispute the fact that the American economy is service-oriented and that services are basically an urban phenomenon. Traditionally it was felt that services were an increasing function of city size but that manufacturing and not services was what caused cities to grow. Indeed the designation of primary, secondary, and tertiary activity (that is, services) clearly defined the line of march vis-à-vis economic expansion. Services were the final layer of activity and presumably would not have been needed in the absence of a labor force present to perform secondary tasks (that is, manufacturing). In an urban context they were nonbasic and perhaps even peripheral with respect to the strength and growth potential of the urban complex.

These views are accurate enough in an historical sense but they do not provide an adequate explanation for the role of services in contemporary America. Recent studies support the hypothesis that services have assumed a much more important role in urban agglomerations. In fact, the growth of services appears to be causing urban expansion in some areas. This new service thrust appears to be independent of actual population size among metropolitan areas.

Indeed, although services appear to have assumed a causative role in urban expansion, it is the national economy and not urban areas per se which has given services the stimulus to expand. Although many services were originally based in large metropolitan complexes, advances in communications have created a demonstration effect. Thus, people in other areas can see their utility if not their necessity. As a result, service activities have proliferated throughout the nation and every city of significant size has felt their impact.

Writing in 1973, Michael Grossman and Victor Fuchs pointed out that "when one speaks of the shift to a 'service economy' it is important to distinguish between shares of output and of employment" ("Intersectoral Shifts and Aggregate Productivity Change," *Annals of Economic and Social Measurement,* Vol. 2 No. 3 (1973), pp. 227–43). They go on to suggest that the output share of the service sector has not experienced any significant change. This conclusion is in keeping with some of Fuchs's earlier work where he suggested differences in productivity between services and manufacturing. Thus it appears that what can definitely be defined as a service economy from an employment standpoint cannot be so obviously categorized from the point of view of output.

Certain studies have alluded to weaknesses and potential problems in the service sector (David L. McKee, "Surplus Labor in a Mature Economy, An Old Setting for a New Problem," *El Trimestre Economico,* forthcoming). In fact, it was suggested that the service sector in advanced metropolitan areas might be the seat of disguised unemployment. In an effort to understand the situation better, it was decided to examine SMSAs that had declined in population during the 1960s. The results demonstrated that "Even in cities with declining populations, service employment is rising — in many cases by substantial amounts" (ibid.). Service employment gained in significance in relation to the total workforce and also in relation to manufacturing employment.

Although such aggregate results are interesting and suggest that there may be a problem, they are only a starting point. Obviously the entire service sector does not suffer from weakness. There are wide variations in skill and remuneration from one service category to another. Defining the service sector to include only activities performed for profit, the 1960 Census listed 17 categories; by 1970 these had expanded to 21. If the problems alluded to in earlier studies are to be unmasked, then the service sector must be disaggregated.

This paper will begin the task of service disaggregation. Using data for SMSAs that experienced population declines during the 1960s, components of the service sector will be examined with an eye to determining which are related to population and which are not. This information should narrow the search for those services, if any, which are in tune with the national demonstration effect alluded to earlier. It should also provide a clue to possible uncalled for service expansion, disguised unemployment, and any consequent structural weaknesses developing in the economy.

A summary of aggregate service data is reproduced here. The data are from final 1970 Census reports. Table 1 shows aggregate service employment for 21 SMSAs experiencing declines in population during the 1960s. (For the purpose of the present study it was felt that Jersey City should be eliminated because of its relationship to the New York metropolitan complex.) These urban complexes are either in declining regions, have been eclipsed by growth centers in their region, or are located in remote areas which bear a questionable relationship to the national economy.

With the exception of Pittsburgh, the centers are of relatively modest size. Thus it would seem that at least in a traditional sense they constitute relatively poor soil for the growth of services. However, the data in Table 1

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Table 1. Service Employment in Declining Metropolitan Areas, 1960 and 1970

	Employment		Change	
	1960	1970	Actual	Percent
Abilene, TX	21,676	22,860	1,184	5.46
Altoona, PA	26,994	26,155	-839	-3.11
Amarillo, TX	31,524	37,546	6,022	19.10
Brownsville, TX	21,865	21,300	-565	-2.58
Charlestown, WV	38,609	42,984	4,375	11.33
Duluth, Superior, MN, WI	45,381	47,903	2,522	5.56
Gadsden, AL	12,593	14,122	1,529	12.14
Huntington, WV	38,089	40,799	2,710	7.11
Johnstown, PA	33,196	37,350	4,154	12.51
Lake Charles, LA	21,435	23,879	2,444	11.40
Midland, TX	12,740	13,136	396	3.11
Pittsburgh, PA	354,930	420,713	65,783	1[illegible].53
Pueblo, CO	17,935	21,904	3,969	22.13
St. Joseph, MO	17,235	17,133	-102	0.59
Savannah, GA	34,473	37,628	3,155	9.15
Scranton, PA	34,237	39,540	5,303	15.49
Steubenville, OH	18,998	21,848	2,850	15.00
Waco, TX	27,177	29,363	2,186	8.04
Wheeling, WV	27,823	30,518	2,695	9.69
Wichita Falls, TX	23,236	24,025	789	3.40
Wilkes Barre, PA	45,096	53,240	8,144	18.06

Source: US Bureau of Census, Census of Population: 1960 and 1970, General Social and Economic Characteristics, Final Report by States (Wasnington: US Government Printing Office, 1961 and 1972).

do not support the traditional viewpoint. Only three of the centers experienced declines in service employment and the largest decline was in the 3 percent range. Of the remainder, 10 experienced increases of better than 10 percent in service employment.

An analysis of disaggregated service sector data may lead to reasonable understanding of the new role of services. As mentioned before, data relating to the private service sector were organized into 17 categories in 1960 and by 1970 the number of categories had been expanded to 21. For convenience those categories have been consolidated here into eight major service subsectors as follows: transportation and communications, wholesale and retail trade, entertainment and recreation, professional services, personal services, financial services, business services, and repair services.

Table 2 contains percentage distributions of employment for service subcategories for all cities under consideration for 1960 and 1970. Naturally, there are variations in the relative importance of particular services from city to city. In order to provide an overview free of local considerations, mean percentage distributions are included together with ranges of variation for each service category. Wholesale and retail trade was by far the most important category in both years, accounting for roughly 37 percent of service employment. This category was followed in 1960 by transportation and communications which accounted for nearly 19 percent of service employment. By 1970 this category had fallen to third place with a mean figure slightly in excess of 15 percent. Personal services were third in importance in 1960, followed by professional services. By 1970 professional services had become the second most important subcategory and personal services had fallen to fourth place.

The four subcategories mentioned accounted for roughly 80 percent of service employment in both years under consideration. Of the remaining categories, entertainment, recreation, and financial services were holding constant at slightly less than 8 percent apiece in terms of employment during the years under consideration. Business services and repair services accounted for a relatively inconsequential share of service employment in both years. While the data contained in Table 2 give a general overview of the relative importance of service subcategories within the private service sector, they shed no

Table 2. Percentage Distribution of Service Employment Among Subsectors in Declining Metropolitan Areas, 1960 and 1970

	Transportation and communication		Wholesale and retail trade		Entertainment and recreation		Professional services		Personal services		Financial services		Business services		Repair services	
	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970
Abilene, TX	13.14	11.99	37.81	36.49	7.80	8.36	9.93	15.84	17.32	12.62	8.55	8.94	1.66	[illegible]	[illegible]	[illegible]
Altoona, PA	41.66	30.27	29.23	32.36	4.97	5.80	8.34	15.73	8.04	7.12	4.36	4.93	0.84	1.11	[illegible]	[illegible]
Amarillo, TX	18.72	18.06	37.43	36.36	7.42	7.22	8.62	12.82	14.20	10.85	8.10	8.75	1.87	[illegible]	[illegible]	[illegible]
Brownsville, TX	[illegible]	13.24	41.10	[illegible]	7.83	6.88	7.24	12.94	19.81	11.63	5.85	7.61	[illegible]	[illegible]	[illegible]	[illegible]
Charleston, WV	20.40	17.08	37.52	37.47	6.83	6.40	11.63	16.63	12.18	9.21	[illegible]	[illegible]	1.68	[illegible]	[illegible]	[illegible]
Duluth, Superior, MN, WI	24.81	19.27	33.65	33.72	7.22	8.79	13.21	19.66	[illegible]	[illegible]	[illegible]	[illegible]	1.16	[illegible]	[illegible]	[illegible]
Gadsden, AL	[illegible]	11.27	37.80	41.33	6.65	6.54	9.66	15.37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Huntington, WV	23.09	20.11	36.41	36.21	6.51	6.97	[illegible]	15.63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Johnstown, PA	18.03	16.51	39.85	37.91	7.76	6.68	[illegible]	[illegible]	11.12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lake Charles, LA	16.99	14.37	34.52	38.21	7.96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Midland, TX	13.93	11.09	33.50	33.08	8.25	6.90	9.38	12.93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pittsburgh, PA	[illegible]	14.71	36.04	36.93	8.09	7.75	12.93	17.93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pueblo, CO	17.11	11.69	33.56	37.97	7.55	8.26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph, MO	[illegible]	[illegible]	[illegible]	[illegible]	6.78	6.87	12.72	17.10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Savannah, GA	[illegible]	17.64	31.38	[illegible]	6.44	6.44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Scranton, PA	[illegible]	[illegible]	39.20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Steubenville, OH	[illegible]	18.56	38.43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Waco, TX	[illegible]	[illegible]	36.90	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wheeling, WV, OH	[illegible]	15.61	38.99	[illegible]	9.86	[illegible]	11.57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wichita Falls, TX	12.39	9.71	36.16	36.92	7.83	9.07	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wilkes-Barre, PA	16.98	13.77	40.11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mean	[illegible]	17.47	36.62	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Range	[illegible]	[illegible]	11.87	[illegible]	[illegible]	4.38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: See Table 1.

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Table 3. Selected Aggregate Employment Data for Declining Metropolitan Areas, 1960 and 1970

	1960	1970	Actual change	Percentage change
Population	5,956,912	5,833,637	-123,275	-2.07
Workforce	2,009,684	2,099,202	89,518	4.45
Manufacturing employment	614,325	598,762	-15,563	-2.53
Service employment	905,242	1,023,926	118,684	13.11
Service subcategories				
Transportation and communications	170,806	158,701	-12,104	-7.09
Wholesale and retail trade	329,796	375,128	45,332	13.75
Entertainment and recreation	70,250	78,638	8,388	11.94
Professional services	107,883	176,405	68,522	63.52
Personal services	111,596	91,839	-19,757	-17.70
Financial services	71,262	85,350	14,088	19.77
Business services	16,413	28,187	11,774	71.73
Repair services	27,236	29,678	2,442	8.97
Workforce/population	33.74	35.98		
Manufacturing/population	10.31	10.26		
Manufacturing/workforce	30.62	28.52		
Services/population	15.20	17.55		
Services/workforce	45.04	48.78		

Source: See Table 1.

light upon the growth of services in general or upon what is accounting for that expansion. The rising significance of private service employment is seen more clearly in the data contained in Table 3.

The decade of the 1960s saw a 2 percent gain in the ratio of workforce to population. During the same period manufacturing maintained a relatively constant relationship to population but lost 2 percent with respect to the workforce. The ratio of services to population gained better than 2 percent and the ratio of services to workforce gained nearly 4 percent. Thus the private service sector experienced definite gains over the period. Data do not appear to support the usual view of services as nonbasic elements in the urban economy, nor do they offer any support to the contention that services are related to city size. The data do suggest that services did increase their own significance during the 1960s.

Perhaps the disaggregated service sector offers some explanation for this phenomenon. Transportation and communications together with personal services can be eliminated from the discussion, since they certainly did not contribute to service expansion in the sense of supplying new employment opportunities. Although they were both included in the leading four service employment categories in 1970, they had experienced a decline during the 1960s. The data suggest that they may have been following the usual role ascribed to services. Certainly they must be eliminated from the list of suspects in the current investigation of service proliferation. Business and repair services can also be eliminated, not because they were not growing but because of their positions relative to the service sector as a whole. Over the period, business services experienced the highest percentage increase of all private service categories. However, in 1970 they accounted for only 2 percent of service sector employment and were not large contributors to overall service growth. Among the subsectors considered, repair services experienced the lowest positive performance.

Of the four remaining categories, professional services exhibited the most spectacular increase, by more than 63 percent and contributing more than 68,000 jobs. The performance of the professional sector adds support to a belief in a national demonstration effect. If problems of structural weakness and disguised unemployment do exist in the service sector, it is unlikely that they have found a home among the professional services.

Problems of overproliferation, if they exist, are presumably resident in the remaining three subsectors — wholesale and retail trade, entertainment and recreation, and financial services. Wholesale and retail trade is the largest service subcategory with respect to employment. During the 1960s, employment in these pursuits grew at a slightly faster rate than was the case for the service sector as a whole and accounted for something on the order of 45,000 new jobs. In 1970 the subsector accounted for roughly 37 percent of private service employment in the SMSAs under consideration. The wholesale and retail functions could have been influenced by a national demonstration effect and certainly they could be the seat of problems of the sort cited earlier.

Entertainment and recreation and financial services accounted for slightly less than 8 percent of service categories but their growth was sufficient to warrant attention. Certainly the former of the two could house the sort of difficulties alluded to. Such difficulties would appear to be less likely in the financial sector but in view of general growth patterns exhibited by banks and certain other intermediaries, it might require further study.

In summary, employment patterns in declining SMSAs suggest that the contention that the traditional role of services in an urban setting has changed. They also support the possible existence of a national demonstration effect.

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Recession with Inflation

The economy has weakened since the end of last year. Real ouput and productivity have declined. Labor markets and consumer spending have softened. It is widely believed that a moderation in the economy will lead to a diminution in inflation. However, such a result occurs only if the decline in economic activity is caused by a reduction in demand. The present weakness in the economy chiefly reflects an adverse shift in aggregate supply. As a result, inflation has accelerated and interest rates have moved higher.

Economic policy measures have probably been restrictive on balance so far this year. Although the pace of monetary expansion has accelerated since spring, the growth in government expenditures has been sharply reduced.

Real Economic Activity Declines

The economy's output of goods and services has slowed markedly since the end of last year. Real gross national product — that is, GNP adjusted for the effects of price level changes — declined at a 2.4 percent annual rate from the fourth quarter of 1978 to the second quarter of this year.

Moreover, there is reason to believe that output has continued to drift lower since the second quarter. Industrial production — which includes output of mines, factories, and utilities — has declined at nearly a 4 percent annual rate. Cutbacks in automobile production have been a major source of weakness.

Housing starts, another measure of physical activity, have moved downward since June. At 1.8 million units in August, housing activity was more than 10 percent lower than during much of last year. It is probable that new home building has been retarded by high interest rates. Even though mortgage interest rates have moved to historical highs, interest rates in other sectors of the economy have jumped even higher. As a consequence, funds have been diverted from housing.

Demand for Labor Weakens

Employment growth has slowed, reflecting the moderation in real output increases. Since the end of last year, employment has expanded at a 2.4 percent annual rate; by comparison total employment grew 3.6 percent in the preceding year.

Employment would have grown even less rapidly — indeed, it might have declined — if the nation's productivity growth had not fallen away from historic patterns. Since last year's fourth quarter, productivity has declined at a 3.3 percent annual rate. This decline follows subpar productivity gains during the preceding six years. Declines in productivity mean that more labor is required to produce a given level of output.

In part, recent productivity declines are a cyclical development. As business firms cut production in the early stages of recession there is normally a rise in the number of employees relative to plant and equipment usage. In addition to cyclical factors, the sharp and persistent rise in energy prices has rendered a portion of the existing capital stock and the corresponding production process economically inefficient. Increasingly, labor has become an economically efficient substitute for plant and equipment.

Unemployment has moved moderately higher since the end of last year. The rise in unemployment chiefly reflects the slowdown in employment growth. As a portion of the labor force, unemployment jumped to 6 percent in mid-August. The rate had fluctuated around the 5.7 percent level during the preceding half-year. In contrast, the unemployment rate had edged downward in the preceding 3½ years.

Household Spending Adjustments

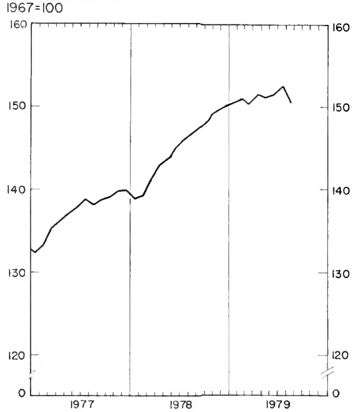
Consumer spending has slowed markedly thus far in 1979, and its composition has shifted. Retail spending, which is importantly affected by "big-ticket" durables and other discretionary expenditures, has risen at a 4

percent annual rate since last December, sharply lower than the 13.5 percent increase last year. The weakening in retail spending is even more dramatic after correcting for changes in consumer prices. Such spending rose about 6 percent in 1978; thus far this year, households have reduced their real retail purchases at more than a 6 percent annual rate.

Total consumer spending, including all nondiscretionary items (such as medical expenditures, food, and housing) has expanded at an 8.6 percent rate this year compared with a 12.4 percent rise last year. In real terms, consumer spending has declined at only a 1.2 percent rate, compared with a 4.5 percent increase in 1978.

In short, consumers are shifting their spending away from those expenditures that can be postponed, and paying what they must for those that cannot be avoided. This adjustment is in response to a sharp slowdown in

Industrial Production



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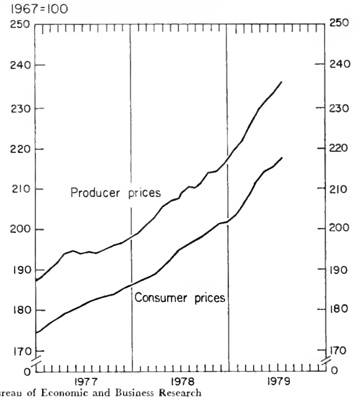
Consumer and Producer Prices



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the growth of real after-tax income. Disposable personal income, adjusted for declines in purchasing power, has risen only slightly since the final quarter of last year; it grew 4.2 percent in the preceding year.

Price Increases Accelerate

The rate of inflation has accelerated since last December. Consumer prices have risen at more than a 13 percent rate, and producer prices have risen at more than a 14 percent rate. In the preceding year consumer and producer prices rose 9.1 percent and 9.8 percent, respectively. The acceleration in producer prices since spring has centered in prices of industrial commodities. Prices of farm products and processed foods have declined since April, while prices of industrial commodities have jumped upward at nearly a 17 percent rate.

The acceleration in inflation has resulted from an increase in the *relative price* of energy that has been converted into a rapid rise in the *general price level*. As already suggested, the rise in energy prices caused a reduction in aggregate supply; that is, there was an increase in costs at any level of output. To sustain production or to achieve further increases it was necessary for aggregate demand to expand — bringing about a marked rise in the price level. This sequence of events has occurred repeatedly since 1973.

Suppose for the moment that the increases in aggregate demand have resulted from explicit economic policy decisions. Aside from accelerated inflation, what have these measures achieved? First, consider their impact domestically. The rise in *general* prices serves to mask the change in *relative* prices. There is a view that it is less painful, at least in the short run, for individuals and firms to accept increases in wages or prices that are smaller

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than those received by others than it is to accept explicit decreases. To the extent that the illusion of improvement persists, the economy's output of goods and services can be sustained or expanded. At length, the change in the distribution of real income is accomplished in disguise.

Inflation also has an important impact on the US economy's international position. It makes the US economy a less attractive market in which foreigners may purchase goods and services, thereby slowing the growth in US exports. By the same token, domestic inflation encourages the growth in US imports. The nation's worsening trade position has contributed to the persistent deterioration in the value of the dollar compared with foreign currencies.

Just as domestic inflation has served to camouflage the redistribution of real income in the US, it has obscured the international redistribution of income. OPEC's increases in oil prices have expanded the flow of nominal income to oil-exporting nations. In order for an oil-exporting nation to convert increases in *nominal income* into increases in *real income,* that nation must import real goods and services. To the extent that oil-importing nations — such as the US — are experiencing inflation, they deprive oil exporters from gains in real income.

Economic Policy Tightens

It would be astutely Machiavellian for policymakers to induce inflationary increases in demand in order to disguise, distort, and frustrate the redistribution of real income flowing from increases in the relative price of energy. Even so, it is unlikely that these policy moves have been deliberate.

Expansive monetary actions are a case in point. Their stimulative character runs contrary to the stated policy of the Federal Reserve System. Since March the money supply has expanded at more than a 10 percent annual rate. In the preceding year it rose 4.6 percent. Thus, monetary growth has accelerated along with the acceleration in inflation.

At the same time, it is popularly believed that monetary policy has tightened. This belief stems from the notion that a rise in interest rates is importantly influenced by the Federal Reserve. Although it may be well within the Fed's awesome power to change the level of interest rates, outside observers would seldom be wrong if they regarded all interest rate changes as the result of shifts in private demand and supply factors. In the present setting, interest rate movements are probably dominated by swings in the rate of inflation — or expectations of future swings.

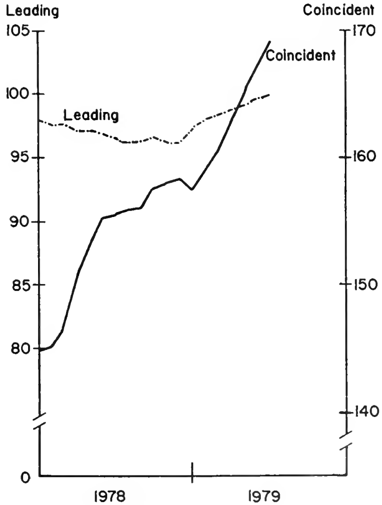
The Federal Reserve tends most often to accommodate shifts in credit demands. Thus, as interest rates rise, money supply growth accelerates; as rates fall, monetary growth slows. Recent and current interest rate increases do not represent restrictive monetary actions. They reflect accelerating inflation. The real rate of interest — that is, interest rates adjusted for expected inflation — has probably fallen in recent months.

Notwithstanding the ambiguous stance of the monetary authorities, overall economic policy actions have probably fostered a restrictive environment. In particular, the growth in government expenditures has been cut back sharply. So far this year government purchases of goods and services have risen at only a 5.5 percent annual rate. By comparison, they rose nearly 10 percent in 1978, and 11.5 percent in 1977. Real purchases (inflation-adjusted purchases) by government have actually declined.

The near-term economic outlook will be dominated by the following features: further rapid increases in prices; higher interest rates; declining real output; slower employment growth; and rising unemployment.

WILLIAM R. BRYAN

Illinois Economic Indicators



Bureau of Economic and Business Research

Our two indicators scored small gains in July as some components increased. Average weekly hours rose by a fairly large amount on a seasonally adjusted basis. Building permits have declined since June. After substantial declines in the last few months, weekly earnings increased slightly in July when inflation is taken into consideration. Employees in the agricultural sector increased in July. Although two indicators made some advances in July, the declines in some components suggest that the state economy may have potential weakness. Data for retail sales and the layoff rate were not available at press time.

CHUN-SANG CHEUNG

Local Illinois Developments

Food stamp usage in Illinois outpaced the national experience. While food stamp payments grew nationally at a 17.2 percent average annual rate from 1972 to 1977, payments to Illinois residents increased at a 20.8 percent rate.

The payment of food stamps represents a public assistance type of transfer payment. Total transfer payments to Illinois residents grew in proportion to the national average. Both increased at a 14.9 percent average annual rate between 1972 and 1977. Transfer payments in general serve to redistribute income, thereby shifting spending decisions within an economy. Food stamp payments enable dollars to be freed that would otherwise be going for food purchases, thus enabling the recipient to purchase alternative goods and services. Other major categories of transfer payments include social security benefits, unemployment insurance, medicare and medicaid, and federal pensions.

Examining the growth of food stamp payments or transfer payments in general, two elements can be identified as having substantial impact on their growth — inflation and unemployment. These two factors have led to more persons becoming eligible for food stamps. Thus it is primarily increased numbers rather than increased benefits which have resulted in the rapid rise in these payments.

Food prices have not increased nearly as rapidly as the growth of food stamp payments. Even so, the 9.2 percent average increase in food prices was a major element in payment increases during the 1972–77 period. Actual food stamp payments have been much larger with greater volatility than the steadily rising price of food. This is due primarily to the effects of unemployment. Tracing the movement of food stamp payments mirrors the movement in the unemployment rate over the 1972–77 period. Food stamp payments showed their most rapid rates of increase during the recession in 1974–75, increasing at over a 41 percent average annual rate. During that same period unemployment rose from an average 4.9 percent in 1973 to over an average 8.5 percent rate during 1975. These large jumps in both unemployment and food stamp payments were followed by a leveling-off period during 1976, with both showing declines during 1977. Unemployment dropped to an average 7.0 percent level during 1977 as food stamp payments dropped some 4.5 percent between 1976–77.

An examination of the distribution of food stamp payments by county in Illinois shows Kane County experienced the largest growth in payments during the 1972–77 period, with a 36.8 percent average annual rate of increase. Even with this rapid growth in payments Kane County still has a lower proportion of food stamp usage than its proportional makeup of the state population.

The effects of higher prices and higher levels of unemployment did not appear to affect either Crawford County's or Marshall County's demand for food stamps as both actually registered drops in food stamp usage between 1972–77. Growth rates of some of the other counties include a steep 30.5 percent average annual increase in Sangamon County and a high 23.1 percent average annual rate in Cook County. Peoria and Champaign counties showed much smaller rates of increase with 8.4 percent and 9.9 percent average annual increases respectively.

As might be expected, the greatest part of the food stamp payments to Illinois goes to the residents of Cook County. What is surprising is the level at which the stamps are used in that county. Cook County accounts for a little over 47 percent of the state's population, but on average receives over 71 percent of the total food stamp payments to Illinois. This figure is more interesting when looking at the relative income of the county. Cook County accounts for 57 percent of the state's personal income. Only one other county in Illinois uses proportionately more food stamps compared with the population that could be classified as wealthy by looking at personal income. This is Du Page County, which could be considered the wealthiest county in the State with personal income of its residents accounting for 4.2 percent of the state figure but with a population making up just .5 percent of the State. Even with this large personal income figure Du Page County uses close to .6 percent of all food stamps in Illinois.

Aside from Cook and Du Page counties only 6 of Illinois's 102 counties use more than their populational proportion in food stamps. These counties include Alexander, Gallatin, Hardin, Kankakee, Pope, Pulaski, and St. Clair. The high percentage use of food stamps in these counties is more easily understood in that all of these counties have proportionally low personal incomes. For example, St. Clair County uses an average 4.8 percent of all food stamp payments in Illinois while having a population that makes up just 2.5 percent of the total. However, the personal income generated within St. Clair County accounts for only 1.5 percent of the state's total.

Other counties such as Henry and Marshall also have personal incomes well below their proportional makeup of the state's population, but still manage to keep food stamp usage quite low. Henry County accounts for .5 percent of the state's population with only .29 percent of the state's personal income. It accounts for just .1 percent of total Illinois food stamp payments. Marshall County's lack of dependence on food stamps is even more evident as it has a proportional population makeup six times greater than its proportional usage of food stamps. Differing costs of living, poorly distributed incomes, and attitudes toward accepting public assistance, could all be identified as factors causing such wide variations in food stamp usage among counties. THOMAS BRYAN

	Food stamp payments (bonus value) (Thousands of dollars)						Percent of state food stamp use 1972-77	Percent of state population 1972-77	Percent of state income 1972-77
	1972	1973	1974	1975	1976	1977			
Illinois	108,567	137,187	204,097	276,127	292,540	279,509	100.00	100.00	100.00
Adams	401	454	672	932	918	972	.34	.62	.53
Alexander	267	344	475	526	536	519	.21	.11	.06
Bond	116	108	185	205	179	187	.08	.13	.06
Boone	101	65	101	336	260	233	.08	.24	.27
Brown	29	32	42	56	49	41	.02	.05	.02
Bureau	102	98	165	188	176	184	.07	.33	.22
Calhoun	41	44	68	74	70	73	.03	.05	.02
Carroll	47	46	74	133	135	143	.05	.17	.08
Cass	60	72	123	144	151	167	.06	.13	.09
Champaign	1,261	1,678	2,568	2,545	2,248	2,030	.95	1.50	1.26
Christian	135	263	457	496	482	508	.18	.33	.25
Clark	113	104	163	218	161	149	.07	.15	.08
Clay	125	104	176	212	196	194	.08	.13	.07
Clinton	111	126	181	264	227	206	.09	.27	.14
Coles	231	242	406	531	520	516	.19	.44	.35
Cook	70,840	96,915	143,778	196,725	214,996	200,401	71.16	47.25	56.95
Crawford	251	126	192	275	203	215	.10	.18	.15
Cumberland	89	79	137	129	107	114	.05	.09	.03
De Kalb	383	266	625	818	532	592	.25	.64	.43
De Witt	54	53	100	131	131	115	.05	.15	.11
Douglas	100	111	157	167	143	125	.06	.17	.19
Du Page	847	656	1,035	2,542	2,541	2,414	.58	.51	4.23
Edgar	139	109	163	202	205	196	.08	.19	.15
Edwards	45	47	63	59	62	58	.03	.07	.05
Effingham	171	142	209	279	225	215	.10	.26	.21
Fayette	123	120	163	208	194	222	.08	.19	.10
Ford	29	62	86	126	120	113	.04	.13	.12
Franklin	293	512	764	875	875	881	.32	.37	.19
Fulton	195	193	281	342	366	450	.14	.38	.26
Gallatin	107	127	213	188	196	184	.08	.07	.05
Greene	184	190	323	390	334	342	.14	.15	.06
Grundy	81	73	115	186	210	184	.07	.25	.22
Hamilton	108	119	152	152	148	153	.06	.08	.03
Hancock	121	120	183	266	247	289	.09	.21	.09
Hardin	89	100	153	215	178	184	.07	.04	.02
Henderson	61	71	101	107	80	84	.04	.08	.03
Henry	141	121	259	225	252	313	.10	.50	.29
Iroquois	94	124	183	281	229	230	.09	.30	.21
Jackson	677	587	821	801	775	795	.34	.50	.37
Jasper	91	70	80	88	71	76	.04	.10	.08
Jefferson	388	398	677	623	658	653	.26	.32	.25
Jersey	148	124	204	227	173	224	.09	.17	.07
Jo Daviess	52	54	95	115	104	81	.04	.20	.08
Johnson	73	70	127	139	148	149	.05	.08	.02
Kane	744	1,031	1,662	3,554	3,579	3,567	1.09	2.42	2.09
Kankakee	866	1,053	1,569	2,393	2,668	2,960	.89	.85	.71
Kendall	45	50	69	165	141	125	.05	.29	.32
Knox	184	224	309	406	386	462	.12	.54	.55
Lake	2,404	1,640	2,032	3,317	3,484	3,508	1.26	3.72	3.37
La Salle	353	303	427	591	687	689	.24	.97	.83
Lawrence	186	201	270	300	284	298	.12	.16	.10
Lee	203	180	184	246	251	252	.10	.32	.24
Livingston	124	118	201	271	270	305	.10	.37	.29
Logan	57	62	136	221	208	227	.07	.27	.25

	Food stamp payments (bonus value) (Thousands of dollars)						Percent of state food stamp use	Percent of state population	Percent of state income
	1972	1973	1974	1975	1976	1977	1972-77	1972-77	1972-77
McDonough	112	138	354	385	291	269	.12	.35	.21
McHenry	541	417	652	1,093	826	703	.33	1.19	.75
McLean	688	601	987	966	889	923	.30	1.06	.93
Macon	1,008	1,113	1,708	2,109	2,127	2,225	.79	1.14	1.24
Macoupin	299	256	386	533	547	618	.20	.41	.20
Madison	2,499	2,934	4,598	5,859	5,479	5,950	2.11	2.19	1.76
Marion	483	453	615	850	826	826	.31	.37	.26
Marshall	49	38	52	53	44	46	.02	.12	.07
Mason	73	103	183	271	257	222	.08	.17	.10
Massac	210	192	275	327	347	333	.12	.13	.07
Menard	38	33	59	100	92	88	.03	.10	.06
Mercer	96	160	48	114	128	161	.05	.16	.06
Monroe	148	112	179	231	165	145	.08	.17	.07
Montgomery	160	145	226	320	339	407	.12	.27	.20
Morgan	182	203	393	436	463	472	.17	.31	.31
Moultrie	65	54	73	89	95	88	.04	.12	.08
Ogle	228	330	344	560	597	576	.20	.38	.24
Peoria	1,789	1,826	2,062	2,328	2,485	2,676	1.01	1.80	2.07
Perry	131	123	134	214	205	204	.08	.19	.16
Piatt	38	46	102	143	142	135	.05	.14	.11
Pike	186	170	280	344	333	373	.13	.17	.08
Pope	75	85	122	141	117	137	.05	.04	.01
Pulaski	265	305	422	416	426	415	.17	.08	.03
Putnam	18	18	28	30	25	30	.01	.05	.05
Randolph	187	187	254	352	349	345	.13	.30	.22
Richland	65	74	115	204	185	154	.06	.16	.12
Rock Island	832	954	1,369	1,753	2,050	2,215	.71	1.46	1.87
St. Clair	5,833	7,012	10,847	13,309	12,818	12,326	4.79	2.51	1.53
Saline	261	359	497	578	571	555	.22	.24	.13
Sangamon	799	1,110	2,002	2,452	2,737	2,907	.93	1.56	1.61
Schuyler	44	50	67	76	63	56	.03	.07	.03
Scott	34	34	57	50	53	44	.02	.05	.05
Shelby	149	133	201	254	236	202	.09	.21	.09
Stark	30	39	55	43	44	42	.02	.07	.04
Stephenson	127	150	185	574	514	482	.16	.42	.35
Tazewell	518	476	707	700	806	957	.32	1.15	1.36
Union	138	165	227	311	272	283	.11	.15	.10
Vermilion	799	874	1,424	1,517	1,319	1,360	.56	.87	.82
Wabash	97	73	118	109	101	107	.05	.12	.38
Warren	89	91	136	190	176	214	.07	.19	.14
Washington	67	61	90	113	134	141	.05	.14	.07
Wayne	178	178	261	244	232	241	.10	.16	.09
White	238	235	288	307	305	300	.13	.15	.09
Whiteside	231	240	309	597	509	555	.19	.57	.46
Will	1,252	1,491	2,375	3,822	3,936	4,362	1.33	2.72	1.68
Williamson	463	675	967	1,221	1,039	1,036	.42	.47	.31
Winnebago	2,433	2,228	3,026	4,133	3,987	3,941	1.52	2.15	2.21
Woodford	42	62	84	101	94	105	.04	.28	.14

Source: Bureau of Economic Analysis.

1977 Transfer Payments By Major Source (thousands of dollars)

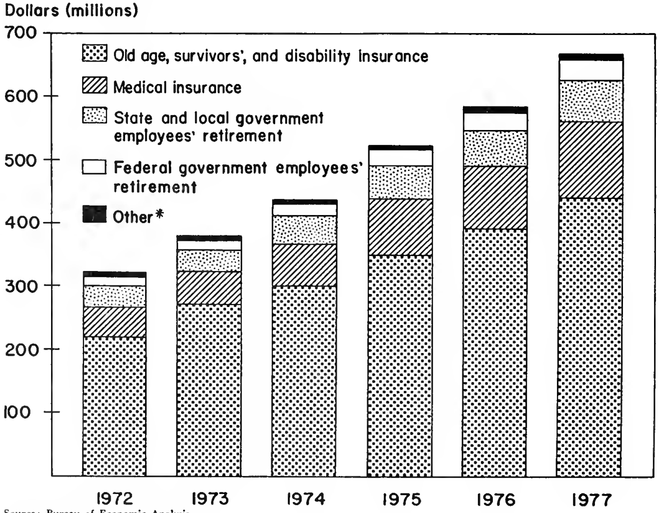
	Total transfer payments	Gov't. payments to individual civilians				Gov't. pay. to ret. mili., vets., and depend.				Payment to nonprofit institutions	Business transfer payments
		Retirement, disability and health insurance	Unemployment insurance	Educational and training assistance payments	Income maintenance payments	Pensions, etc.	Unemployment ins. for vets.	Educ. pay. to vets., depend., and surv.	Gov't life insurance benefits payments		
US	208,824,000	132,812,200	12,607,000	1,926,800	23,839,000	17,449,000	463,000	3,179,000	982,000	5,505,000	9,631,[illegible]
Illinois	10,889,719	6,876,199	978,667	113,664	1,394,697	417,510	22,903	119,012	49,594	323,024	586,[illegible]
Adams	73,320	48,984	7,018	782	4,829	4,679	155	807	331	2,024	3,666
Alexander	17,057	9,791	2,176	50	2,957	963	14	71	40	359	629
Bond	15,550	10,300	2,167	289	709	743	28	142	57	423	682
Boone	30,319	12,634	13,391	108	1,007	[illegible]	64	333	117	767	1,291
Brown	6,188	4,364	728	23	286	312	7	37	21	161	246
Bureau	37,056	27,252	3,922	149	898	1,375	67	346	156	1,062	1,744
Calhoun	6,444	4,510	675	23	349	384	10	59	24	162	245
Carroll	20,107	15,831	1,166	124	683	650	29	146	68	541	858
Cass	16,066	11,694	1,375	58	862	738	31	156	61	413	668
Champaign	124,341	73,050	9,376	3,423	9,911	12,710	377	1,962	625	4,539	8,268
Christian	42,683	32,724	2,263	158	2,049	1,469	76	394	161	1,074	1,806
Clark	16,186	12,020	889	66	658	1,057	31	157	69	468	760
Clay	16,485	10,970	2,026	60	1,049	1,040	22	116	59	435	698
Clinton	26,277	17,070	3,448	123	885	1,928	69	358	123	874	1,381
Coles	48,074	32,426	3,591	1,838	2,609	2,476	121	624	218	1,457	2,683
Cook	5,606,311	3,348,781	489,310	58,946	1,017,211	154,154	11,030	57,338	24,479	154,230	287,098
Crawford	22,069	16,209	1,349	202	1,018	1,419	36	190	90	583	961
Cumberland	10,164	6,227	1,967	42	411	587	22	111	46	298	448
De Kalb	51,655	34,790	3,892	2,481	1,924	1,613	162	838	287	2,061	3,563
De Witt	15,401	10,883	1,332	68	562	908	36	187	78	489	847
Douglas	15,232	10,517	1,162	80	736	856	36	183	79	575	996
Du Page	355,867	252,661	18,172	3,595	10,559	13,954	976	5,080	2,343	16,117	32,063
Edgar	20,709	14,722	1,249	89	1,250	1,391	34	181	88	628	1,065
Edwards	7,589	5,028	1,142	31	348	383	10	55	26	220	343
Effingham	23,764	16,130	2,066	116	1,312	1,350	43	225	97	821	1,588
Fayette	21,100	14,486	2,280	86	1,160	1,189	34	176	82	607	988
Ford	17,535	12,210	1,599	60	616	1,561	33	167	72	431	776
Franklin	65,655	47,124	7,029	169	4,327	3,249	62	320	168	1,197	1,986
Fulton	43,682	33,055	2,259	248	2,350	1,728	79	410	181	1,249	2,096
Gallatin	9,198	5,550	1,498	27	824	687	12	64	30	196	307
Green	17,870	12,196	1,473	68	1,508	1,060	36	191	76	485	766
Grundy	26,038	16,612	4,980	116	704	957	50	262	121	824	1,396
Hamilton	11,724	7,363	2,154	34	733	719	10	56	32	242	378
Hancock	23,010	17,601	838	332	1,147	1,084	46	248	100	638	963
Hardin	6,940	4,362	944	21	752	442	5	24	17	151	219
Henderson	6,710	4,992	219	34	377	339	21	101	39	245	339
Henry	46,689	34,442	3,007	276	1,642	2,102	107	557	229	1,614	2,680
Iroquois	31,784	24,259	1,714	138	1,237	1,302	65	342	133	976	1,598
Jackson	61,947	37,730	7,021	4,079	4,438	3,104	155	800	234	1,568	2,783
Jasper	9,757	7,148	493	45	422	658	21	100	42	320	503
Jefferson	41,413	26,113	5,879	372	3,385	2,433	50	263	132	1,002	1,765
Jersey	15,721	10,249	1,817	78	922	832	41	213	79	559	918
Jo Daviess	18,710	14,3[illegible]	983	93	512	831	33	168	77	655	1,025
Johnson	11,005	[illegible]	1,999	36	868	685	17	93	37	256	387
Kane	225,367	151,059	23,300	1,638	15,248	7,000	565	2,937	1,141	7,804	14,473
Kankakee	99,812	63,[illegible]	9,250	1,017	13,422	2,998	203	1,054	413	2,780	5,066
Kendall	15,757	10,714	798	129	448	823	62	322	120	916	1,408
Knox	58,097	40,577	5,390	488	2,904	2,633	127	662	278	1,768	3,231
Lake	268,377	181,9[illegible]	22,734	2,082	18,260	24,874	775	4,027	1,713	11,030	20,716
La Salle	112,008	79,4[illegible]	12,943	624	3,645	4,305	219	1,136	493	3,149	5,939
Lawrence	19,669	13,9[illegible]	1,644	71	1,289	1,165	26	135	71	510	767
Lee	34,553	24,846	3,799	415	1,222	985	57	302	143	1,031	1,732
Livingston	34,816	26,338	1,668	162	1,313	1,419	90	462	177	1,154	2,007
Logan	29,573	22,2[illegible]	1,577	448	1,097	1,252	50	266	140	900	1,540
McDonough	32,51[illegible]	[illegible]	3,709	1,479	1,329	1,480	88	448	149	1,1[illegible]	2,016
McHenry	98,151	69,9[illegible]	9,032	599	2,668	3,640	[illegible]43	1,262	520	3,718	6,4[illegible]
McLean	87,467	57,54[illegible]	7,107	3,350	4,482	3,658	222	1,155	42[illegible]	[illegible]	[illegible]
Macon	110,213	69,442	10,545	855	10,516	5,438	277	1,444	587	[illegible]	6,5[illegible]
Macoupin	56,405	41,299	5,329	335	2,682	2,501	86	455	189	1,328	2,173
Madison	259,678	165,585	27,508	3,748	25,577	12,133	613	[illegible],179	1,244	7,169	1[illegible]
Marion	58,507	40,[illegible]3	7,669	328	3,393	3,091	91	[illegible]	[illegible]	[illegible]	[illegible]
Marshall	11,917	8,9[illegible]	761	55	358	[illegible]	29	[illegible]	[illegible]	394	[illegible]
Mason	17,594	13,[illegible]	1,080	77	949	[illegible]	24	[illegible]	[illegible]	[illegible]	892
Massac	17,033	10,4[illegible]	2,259	56	1,774	1,1[illegible]	41	[illegible]	[illegible]	412	653
Menard	11,401	8,5[illegible]	918	44	603	[illegible]18	22	116	[illegible]	316	4[illegible]1
Mercer	15,162	11,2[illegible]	1,084	[illegible]	609	623	29	153	63	[illegible]19	749
Monroe	16,692	11,428	1,632	77	657	[illegible]	33	[illegible]71	78	549	839
Montgomery	36,578	2[illegible],659	4,315	13[illegible]	1,642	1,386	59	[illegible]98	132	894	1,569
Morgan	37,258	25,049	3,710	535	2,658	1,71[illegible]	71	371	1[illegible]4	1,035	1,937
Moultrie	13,691	1[illegible],551	746	52	604	721	28	[illegible]41	[illegible]	372	612
Ogle	33,399	24,265	1,760	174	2,011	1,1[illegible]	41	[illegible]69	[illegible]74	1,236	2,025
Peoria	185,2[illegible]	126,[illegible]	[illegible],759	[illegible],857	14,081	[illegible]	[illegible]	[illegible]	[illegible]	5,785	11,267
Perry	25,356	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,501
Piatt	13,885	10,61[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pike	21,176	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	870
Pope	5,318	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pulaski	12,562	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Putnam	5,190	3,660	[illegible]	[illegible]	10[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	227

1977 Transfer Payments By Major Source (thousands of dollars) (continued)

	Total transfer payments	Gov't. payments to individual civilians				Gov't. pay. to ret. mili., vets., and depend.				Payment to nonprofit institutions	Business transfer payments
		Retirement, disability and health insurance	Unemployment insurance	Educational and training assistance payments	Income maintenance payments	Pensions, etc.	Unemploy-ment ins. for vets.	Educ. pay. to vets., depend., and surv.	Gov't life insurance benefits payments		
Randolph	34,387	23,450	4,005	142	1,428	2,151	83	427	150	945	1,584
Richland	16,636	11,394	1,358	245	1,004	997	29	151	63	499	885
Rock Island	151,180	108,649	8,538	1,209	9,947	6,135	377	1,955	780	4,767	8,718
St. Clair	299,734	157,799	27,516	2,648	62,847	22,475	611	3,181	1,261	8,057	13,138
Saline	42,942	29,917	4,862	355	2,978	2,267	46	242	116	785	1,358
Sangamon	186,187	130,813	15,283	1,351	13,002	8,404	338	1,747	755	5,002	9,383
Schuyler	8,549	6,029	858	33	370	509	15	86	35	233	377
Scott	6,073	4,397	517	24	261	315	12	65	24	175	279
Shelby	21,490	15,172	1,763	95	1,060	1,323	45	237	94	672	1,015
Stark	6,689	5,323	53	30	284	345	19	94	35	211	291
Stephenson	41,663	29,319	3,705	342	2,003	1,599	100	520	199	1,373	2,474
Tazewell	94,795	65,234	8,018	520	4,703	3,786	289	1,500	589	3,699	6,376
Union	22,907	13,972	4,182	68	1,802	1,345	33	173	72	483	766
Vermilion	100,646	63,858	12,766	792	7,313	6,120	195	1,019	476	2,911	5,133
Wabash	11,851	8,250	636	189	737	786	24	118	55	394	653
Warren	20,361	14,745	1,209	228	1,302	864	40	204	85	621	1,050
Washington	16,325	11,159	2,273	61	579	915	29	156	54	438	651
Wayne	19,271	12,221	3,090	70	1,201	1,094	31	156	71	498	828
White	20,746	14,533	1,854	69	1,394	1,253	28	143	73	496	892
Whiteside	50,309	35,766	3,456	311	2,915	1,747	122	636	249	1,863	3,204
Will	211,604	130,246	27,315	2,115	17,396	7,049	529	2,756	1,148	8,628	14,178
Williamson	73,358	48,685	10,806	464	4,343	3,950	110	570	238	1,497	2,662
Winnebago	199,328	130,712	15,288	1,394	19,614	7,537	570	2,963	1,117	7,047	12,926
Woodford	20,903	15,846	443	237	792	814	59	298	113	884	1,400

Source: Bureau of Economic Analysis.

Retirement, Disability, and Health Insurance Payments to Illinois Residents, 1972–77



Source: Bureau of Economic Analysis
* "other" includes workmen's compensation benefits to retired and disabled railway workers, black lung payments, and other government disabled and insurance payments.

Comparative Economic Data for Selected Illinois Cities, July 1979

	Building Permits[1] (000)		Electric Power Consumption[2] (000,000 kwh)		Postal Receipts[3] (000)		Employment[4,5] (000)		Estimated Work Force Unemployed (percent)[4,5]	
	July 1979	% change from July 1978	July 1979	% change from July 1978	July 1979	% change from July 1978	July 1979	% change from July 1978	July 1979	July 1978
ILLINOIS	$ 255,005[a]	+38.8	3,644.7[a]	-0.7	$ 45,274[a]	+6.4	4,874.7	+2.9	5.2	5.2
NORTHERN ILLINOIS										
Chicago	$ 148,884	+38.1	1,787.8	-0.6	$ 34,627	+6.8	3,265.0	+1.0	5.7[d]	6.0
Aurora	7,075	+66.7	116.3	-18.5	616	+16.4	38.2	+1.0	5.1	5.8
Elgin	2,064	-73.5	95.3	+5.1	652	+9.0	27.9	+1.0	5.9	6.7
Joliet	1,771	-18.9	392.7	+5.1	316	-4.8	46.8	+1.0	5.4	6.1
Kankakee	579	+120.1	73.3[h]	+7.1	198	-15.0	37.2[d]	-0.5	9.8[d]	8.6
Rock Island-Moline	3,164	+5.9	131.9[c]	-2.9	1,097	+19.8	177.5[d]	+2.3	4.3[d]	5.4
Rockford	11,052	+189.3	173.9	+10.2	890	+6.9	132.5[d]	+1.9	5.6[d]	5.4
CENTRAL ILLINOIS										
Bloomington-Normal	$ 8,684	+185.7	52.7	-7.7	$ 911	+1.2	54.9[d]	-4.1	4.7[d]	4.6
Champaign-Urbana	1,508	-55.0	56.3	-0.7	580	-9.5	74.9[d]	+6.2	5.1[d]	5.3
Danville	855	+36.1	46.6	-0.4	193	-9.8	18.9	-1.5	7.8	8.1
Decatur	2,182	-81.1	126.9	-2.6	478	-0.6	56.5[d]	-1.5	6.8[d]	6.6
Galesburg	5,727	+235.8	30.4[b]	-7.5	132	-20.4	15.5	-5.4	7.6	7.3
Peoria	38,709	+676.8	201.1	+2.8	1,255	-6.5	169.3[d]	+0.3	5.3[d]	5.3
Quincy	1,134	+200.0	43.0	-4.2	228	+4.5	42.9	-1.3	5.6	6.9
Springfield	17,141	+272.5	137.0	-8.6	2,157	+16.5	91.0[d]	-2.6	6.2[d]	5.7
SOUTHERN ILLINOIS										
East St. Louis	$ n.a.	n.a.	26.2	-19.3	$ 168	-0.5	23.2	+3.5	12.6	10.1
Alton	359	-29.0	84.2	+0.5	137	+7.0	15.7	+3.2	7.8	7.2
Belleville	1,454	+8.2	32.2	-9.2	358	+21.7	20.3	+3.5	5.4	4.2
Carbondale-Murphysboro	2,664	+22.8	36.9	-1.6	281	-2.0	13.5[e]	n.a.	10.2[e]	8.4

[1]Local sources; data include federal construction projects. [2]Local power companies. [3]Local post office reports; accounting period ending 10 August 1979. [4]Illinois Department of Labor; preliminary. [5]Data for June 1979 compared with June 1978.

[a]Total for cities listed. [b]Includes immediately surrounding territory. [c]Includes East Moline. [d]Data for standard metropolitan statistical area.

[e]Data for Carbondale township.

The World Bank and the International Development Association: Increased Food Production I

ROLAND W. BARTLETT

There has been a more rapid increase in the world's population than in food production. This presents a basic problem. The World Bank and the International Development Association (IDA) have initiated activities in over 80 countries designed to aid in resolving this problem and to improve living standards. There is evidence that the World Bank/IDA projects have been helpful, and offer promise for the future. Food production and incomes have already been increased substantially in several countries where World Bank/IDA projects were initiated several years ago. Examples of this are Cameroon, Upper Volta, and India.

Massive contributions by countries throughout the world are concrete evidence of the respect of these countries for the expertise of the World Bank/IDA personnel in initiating, carrying out, and monitoring their projects. In 1978 the total cost of 236 projects initiated by the World Bank/IDA was $31.9 billion. Loans and credits from the World Bank/IDA in 1978 were $8.4 billion, or only 26 percent of the total. Hence, 74 cents of every dollar invested in these projects in 1978 came from countries where the projects are located or from outside countries. Individual countries contributing to World Bank/IDA projects in low-income countries in 1978 were Australia, Canada, France, Germany, Iran, Italy, Kuwait, Netherlands, Norway, Nova Scotia, Sweden, United Kingdom, and the United States. These contributions were in addition to their investments in the World Bank.

Successful World Bank/IDA Projects

Cameroon has participated in several World Bank/IDA projects. Cameroon, located on the west coast of Africa, is an area larger than California. In 1975, it had a population of 6,398,000 and a gross national product of $290 per person, or slightly under the $325 average for western Africa. Cocoa and rubber are among its agricultural exports.

An IDA project to expand rice production and increase incomes of small farmers was initiated in Cameroon in 1972. This activity has resulted in a large expansion in rice production on 11,000 acres along the Logone River in northern Cameroon by irrigation, flood control, double-cropping, and improved transplanting methods. A new rice mill has been constructed in this area and several roads upgraded. By 1985 rice production in this area alone could meet 40 percent of Cameroon's expected demand. Incomes of some 13,000 small farmers were increased fivefold as a result of this activity. IDA gave a $3.7 million credit, or 49 percent of $7.6 million, the total cost for this project. The other 51 percent or $3.9 million, was contributed by the Cameroon government. Success in the rice project paved the way in 1975 for initiation of a large cocoa project and of a rubber project.

In 1975, the World Bank initiated a project in Cameroon to improve the productivity of 123,000 acres near Yaounde used to produce cocoa. As soon as expanded cocoa production gets underway, incomes of some 32,000 farm families may be increased substantially.

Expertise of the World Bank/IDA in setting up, carrying out, and monitoring its projects appears to be helpful in attracting outside funds. The World Bank is loaning only $6.5 million, or 27 percent of the cocoa project's total cost of $23.8 million. The remaining funds are being provided jointly by the French agencies, Caisse Central de Cooperation Economique and Fonds d'Aide et de Cooperation, and the local Cameroon government. In essence, the French agencies and the Cameroon government are assuming the "risk" costs of this cocoa project, with Cameroon making use of World Bank personnel to ensure wise use of funds.

Under an IDA project begun in 1975, around 15,000 acres in Cameroon will be cleared and planted with high-yielding rubber. Credits of $16.0 million, or 56 percent of its total cost of $28.5 million, were obtained from IDA. The remaining costs were financed jointly by a French agency and the Cameroon government. It is estimated that the estate will have a peak production of 13,000 tons of rubber annually once the new plantings come into full production. Around 3,000 farm families will be provided with improved housing, health, education, and social facilities, as a result of increased income from this project.

World Bank/IDA have extended their activities to projects other than rice, cocoa, and rubber. In 1974, the World Bank made a loan to Cameroon to develop livestock products of 150 private ranches and farms, and of three 50,000-acre ranches. The dreaded tsetse fly will be cleared from 2 million acres included in these ranches and farms.

In 1978, the World Bank made a loan to establish

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a new palm oil estate in Cameroon to meet the rising domestic demand for palm oil and also inaugurated a program for the development of small holdings. In addition to increasing the food supply, each successful project materially improved living standards of those employed in carrying out the project.

The *Upper Volta* has benefited from World Bank/IDA projects. Upper Volta is located in an inland plateau region in West Africa. It is approximately the size of Colorado, having a population of 6,032,000 in 1975 and a GNP of $110 per person. Its GNP was thus only a third of the $325 average for western Africa. Over 90 percent of the people in Upper Volta are subsistence farmers, with cattle and sheep being their principal export.

In 1972 the IDA began what it termed a "new-style" project. This consisted of a series of small-scale actions, including 250 wells dug to provide clean water for domestic use; 650 village warehouses built to store grain; 3,700 acres of land improved through soil and conservation measures; and 240 miles of feeder roads upgraded. These results were obtained under the strong leadership of the Upper Volta Project Authority, the regional development associations, and labor donated for construction activities by local communities. The success of this project has paved the way for several new agricultural projects in Upper Volta since then.

The climate in Upper Volta is extremely dry. Prior to any assistance from IDA, an irrigation project was initiated from a United Nations Special Fund, using water from the Black Volta, the White Volta, and water pumped from underground. The IDA 1972 Upper Volta project was successful in providing well water, building village warehouses, and improving the productivity of the land and building feeder roads.

The success of the 1972 project helped to generate large contributions from outside countries and agencies in funding a $17.2 million IDA agricultural project in 1977 supplementing an IDA credit of $3.6 million and $1.6 million of Upper Volta government funds. The remaining $12 million was provided by Canada, the Arab Development Fund, and the Swiss Technical Cooperation.

This project was directed toward several purposes: to increase the production of cotton and cereals; to initiate simple irrigation systems to increase the production of rice, other grains, and vegetable products; to construct a granary; to build village grain storage facilities; to build a training center for extension workers; to construct feeder roads; and to introduce labor-saving devices to improve the condition of women. It is estimated that 46,500 farm families will benefit from this project.

Cattle production is a major industry in Upper Volta. In 1975, the IDA initiated a study to improve its efficiency by introducing more up-to-date commercial ranching in place of traditional methods. This was to be brought about by establishing a ranch development center and nine group ranches; constructing a livestock market; providing improved veterinary services; and upgrading 456 miles of stock routes. It has been estimated that 330,000 cattle producers will benefit by this project.

Between 1974 and 1978, the World Bank/IDA initiated four agricultural projects in Upper Volta. Bank/IDA loans or credits for these projects were $30 million, or 56 percent of their total cost.

India has benefited from World Bank/IDA programs. India, a member of the British Commonwealth, has been an independent republic since 1951. One-third the size of the United States, in 1975 it had a population of 608,072,000, or nearly three times that of the US. Its GNP in 1975 was $140 per person, or about the same as the $137 average of South Asia.

The foundation for successful World Bank/IDA projects to expand food production and improve living standards in India was laid between 1952 and 1973 by six US land-grant universities and various private foundations. During this period 339 men and women from these universities spent a total of 600 man-years to improve institutions and increase food production in India. Nine land-grant universities were established, built on a research, teaching, and extension program similar to that used by land-grant universities in the US. The American institutions which sponsored the universities in India were the Universities of Illinois, Ohio State, Tennessee, Missouri, Kansas State, and Penn State.

World Bank/IDA projects have also resulted in increased food production. Major attention has been centered on providing improved farm credit, getting more water for crops, improving seed and cropping practices, building grain storage facilities, upgrading roads, and training people in each locality to use practices to improve their standard of living.

Increased availability of farm credit is essential for most needed changes. More water is probably most important in increasing food production. Machinery is necessary to dig wells, electric pumps are necessary to pump underground water, and lining of irrigation ditches is often necessary to conserve water. In some areas a new dam is needed to conserve water between seasons.

To prevent famine, village storage facilities are necessary to store grain from good years to bad years. Upgrading of roads is vital to prevent starvation in remote areas. Some projects help to improve the diet by expanding the production of fish, milk, and fruit.

Between 1970 and 1978, the World Bank/IDA initiated 46 agricultural projects for increasing food production and improving living standards in India. The total cost for these projects was $3.6 billion; the Indian government contributed $1.7 billion and the World Bank/IDA $1.9 billion, or 53%.

Partially reflecting these projects, in 1976 and 1977, the growth in food production in India was greater than the growth in birthrate. High food production in both years resulted in part from favorable monsoons. Also between 1955 and 1974 there was a 17 percent decline in the birthrate, partly because of birth control programs of Prime Minister Gandhi.

In this article, attention has been directed toward World Bank/AID assistance to three specific countries. Another approach to discussing the operations of these agencies is to concentrate on the types of assistance they

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offer. In a subsequent issue there will be a presentation of assistance geared toward transportation systems, power projects, industrialization, water and sewage systems, services, education, and nutrition.

1977 Income and Employment Data Available

Detailed BEA income and employment data are available for each of the 102 counties and 10 SMSAs of Illinois for 1971 through 1977. A charge of $20 will be made for the entire set to cover xeroxing and handling costs. A minimum charge of $2 will be made for individual county requests totaling 3 counties or less, and $1 per county for additional counties requested. A charge of $12 will be made for the 1977 transfer payment data for the 102 Illinois counties. Those interested in obtaining the data may write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois, 61801. Please make check payable to the University of Illinois.

Illinois Business Indexes

Item	July [illegible]	June [illegible]	May [illegible]	April [illegible]	[illegible]
Leading indicator [illegible]	[illegible]	[illegible]	[illegible]	98.4	[illegible]
Coincident indicator [illegible]	[illegible]	[illegible]	[illegible]	162.9	[illegible]
Employment-manufacturing (in thousands)[1]	[illegible]	[illegible]	[illegible]	1,245.9	1,241.2
Average weekly hours-manufacturing[1]	[illegible]	[illegible]	[illegible]	39.4	39.3
Weekly earnings-manufacturing[1]	[illegible]	[illegible]	[illegible]	$241.1	[illegible]
Layoff rate-Chicago[1]	[illegible]	[illegible]	[illegible]	0.6	[illegible]
Ordinary life insurance sales [illegible][2]	[illegible]	[illegible]	$1,568	$1,462	$1,169
Retail sales (in millions)[3]	[illegible]	[illegible]	3,856	$3,861	[illegible]
Coal production (in thousands)[5]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Petroleum production (in thousands)[5]	[illegible]	[illegible]	[illegible]	1,846	[illegible]
Vendor performance (per cent)	[illegible]	[illegible]	[illegible]	76	56
Building permits (in thousands)[6]					
Residential housing units	[illegible]	[illegible]	[illegible]	4.30	[illegible]
Value of residential housing	[illegible]	[illegible]	[illegible]	$178,204	[illegible]
Value of nonresidential buildings					
Industrial buildings	[illegible]	[illegible]	[illegible]	[illegible]	$32,865
Office, banks, and professional buildings	[illegible]	[illegible]	[illegible]	$41,346	$11,463
Stores and other mercantile buildings	[illegible]	[illegible]	[illegible]	$31,985	$20,196
Other	[illegible]	14,346	[illegible]	$36,454	$24,462
Consumer price index[1]					
North Central US	n.a.	[illegible]	n.a.	115.0	191.4
Chicago	[illegible]	[illegible]	[illegible]	208.[illegible]	n.a.
North Central population [illegible]	[illegible]	[illegible]	n.a.	[illegible]	n.a.
North Central population [illegible]	n.a.	[illegible]	n.a.	115.1	n.a.
North Central population [illegible] to 385,000	n.a.	[illegible]	n.a.	114.0	n.a.
North Central population less than [illegible],000	n.a.	[illegible]	n.a.	114.1	n.a.
	[illegible]	[illegible]	[illegible]	1978 II	1978.I
Personal income (in millions)	[illegible]	[illegible]	[illegible]	97,3[illegible]1	94,325

[1]Ill. Dept. of Labor. [2]Life Ins. Agcy. Manag. [3]U.S. Bureau [illegible] [4]U.S. Dept. of Commerce [5]Ill. Dept. of Mines. [6]Ill. [illegible] Survey.

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Federal Reserve Action and Market Reaction

The Federal Reserve has announced two significant changes in monetary arrangements. One, reserve requirements have been extended on certain bank liabilities that were previously exempt from reserve requirements. Two, the Federal Reserve has shifted its attention to movements in monetary aggregates as a gauge for the short-term effects of monetary policy. In addition to these important changes, the Fed announced a full percentage increase in the discount rate.

Financial markets have made dramatic adjustments to the Federal Reserve actions. Interest rates have jumped sharply, while the stock market has sagged. Effects on the economy will not be discernible for some time to come. However, in terms of intention this much is clear. Monetary policy has tightened. The test for the monetarists may be at hand.

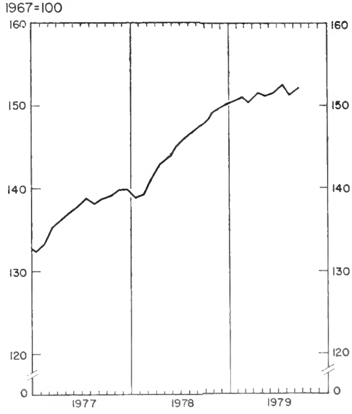
Changes in Federal Reserve Rules

After three months on the job, Paul A. Volcker, the newly-appointed Chairman of the Board of Governors of the Federal Reserve System, has announced an important series of changes.

First, the discount rate was increased by a full percentage — from 11 percent to 12 percent. The discount rate is the rate of interest charged by Federal Reserve Banks for borrowing by member banks. The chief impact of this action has been on expectations of market participants, businessmen, and others who evaluate economic policy measures. The discount rate increase does not represent a significant cost increase to banks. Member bank borrowing totaled just over $1.5 billion in mid-October — little more than one-tenth of 1 percent of total bank credit. Indeed, a relatively small number of the 14,000 banks throughout the nation ever borrow from the Federal Reserve.

A second action was of substantially greater significance. Reserve requirements have been extended to include Eurodollar and federal funds borrowing by member banks from banking institutions that are not members of the Federal Reserve System. For each $100 of such borrowing a bank must hold an additional $8 in its deposit account at its Federal Reserve Bank. The broad-

Industrial Production



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ening of reserve requirements to include Eurodollar and federal funds borrowing has two consequences. One, there is an immediate and substantial increase in the cost of such borrowing. For example, suppose the cost of borrowing prior to reserve requirements were 12 percent. The imposition of an 8 percent reserve requirement raises the effective cost of borrowing to just over 13 percent. Two, and fundamentally more important, by making Eurodollar and federal funds borrowing substantially subject to reserve requirements the Federal Reserve strengthens its ability to control bank liabilities.

The chief monetary effect of reserve requirements is to set an outer limit on the size of bank liabilities. Suppose, for example, that the reserve requirement on bank deposits and borrowings is 8 percent; also suppose that total bank reserves are $50 billion. This would mean that total bank liabilities could reach a maximum of $625 billion (.08 × $50 billion = $625 billion). It also means that when the Federal Reserve expands bank reserves by $1 billion, total bank deposits and borrowing can rise by $12.5 billion.

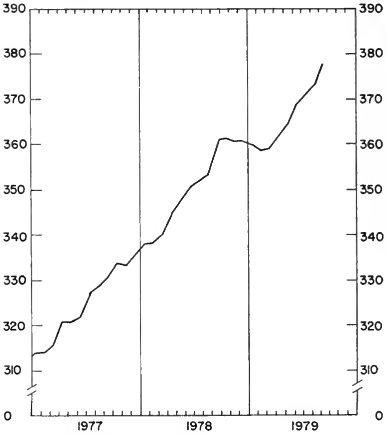
There is another side to the monetary coin. By limiting the growth of bank liabilities, the Federal Reserve controls the growth in bank credit. Thus, by extending reserve requirements to apply to Eurodollar and federal funds borrowing the Federal Reserve strengthens its control over the volume of bank lending.

The remaining link in strengthening the monetary management process was for the Federal Reserve to reinforce its control over bank reserves. This link was potentially strengthened when Volcker announced that monetary actions would henceforth be geared toward achieving target growth rates in so-called monetary aggregates. Heretofore, short-term Fed operations were directed toward achieving a level of money market interest rates (for example, the interest rate on federal funds borrowing), or toward maintaining rates within a narrow range.

The Federal Reserve pursues its objectives by buying and selling government securities. These purchases and sales are referred to as "open market operations." If the Fed wishes to resist market pressures serving to drive interest rates higher it must purchase government securities. It buys on the open market. By purchasing, the Federal Reserve adds to bank reserves. Conversely, in

Money Supply

Billions of dollars



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order to prevent interest rates from falling, the Federal Reserve engages in open market sales, thereby reducing bank reserves.

By specifying this subtle change in its operating strategy, the Federal Reserve may have embarked on a bold new course. If the Fed sets its open market operations to achieve a bank reserves target, it must relinquish control over interest rates. Thus, interest rates move to whatever level the market sets. When the Fed controlled interest rate movements, it relinquished control over bank reserves. That is, open operations were whatever was necessary to achieve its interest rate targets.

Market Response to Fed Changes

The announcement of new Federal Reserve operating procedures sent reverberations throughout financial markets. During the first week following the policy actions, the Dow Jones industrial average fell nearly 60 points, creating about $55 billion in stock losses. Such a response may suggest that investors were frightened by the prospective adverse impact on the economy of these monetary moves; alternatively, the initial stock market response may be a short-term reaction by those adversely affected by a sharp jump in interest rates. Certainly, rising interest rates increase the costs to those whose market position is significantly financed by debt.

Short-term interest rates have risen dramatically since the Fed policy shift. The prime rate, the rate of interest charged by banks to their most credit-worthy customers, jumped by one-and-one-half percentage points — reach-

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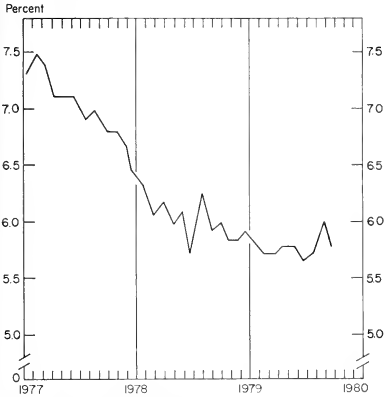
Unemployment Rate



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ing 15 percent in late October. Yields on short-term commercial paper and Treasury bills have also risen more than 150 basis points. (For example, a rise from 11 percent to 12 percent is referred to as a 100 basis points increase.)

Longer-term securities have also experienced an important increase in yields. Yields on United States Treasury securities maturing in 3–5 years rose from just over 9.5 percent in late September to about 10.6 percent in late October. Long-term US Treasury securities yields have risen about 75 basis points. Holders of US Treasury securities (or holders of many bonds issued by corporations) receive semiannual interest payments — in an amount determined at the time any particular issue was initially sold by the Treasury to the public. The size of the semiannual payments does not change. Instead, as market interest rates rise, there are declines in the prices of already outstanding securities. Thus, good news to new investors is sour medicine to investors who may have been holding securities for several years.

Monetary Effects of Fed Changes

It is too early to determine whether the pace of monetary expansion has slowed. In fact, the Federal Reserve actions were not fully implemented until mid-November.

But the background against which change may be judged is clear. From April to mid-October, the narrow money supply (M_1) expanded at more than an 11 percent annual rate. The broad money supply (M_2), which includes net time deposits in addition to M_1, rose at a 12.5 percent rate. Over this same period, business loans at large banks exploded at a 26.6 percent annual rate.

These past rates of expansion of money and credit are extremely rapid. At the same time, the financial system has been extremely inventive in devising techniques by which medium-to-large investors can place their funds into interest-earning assets and, at the same time, maintain ready access to liquidity. Certain money market mutual funds and municipal bond funds are examples of such financial innovations. Thus, while the traditional money supply has been expanding rapidly, its substitutes have also grown at an extraordinary pace.

By the time this piece will have gone to press we will have accumulated several weeks' monetary growth experience. Hopefully, a slowdown will be in evidence.

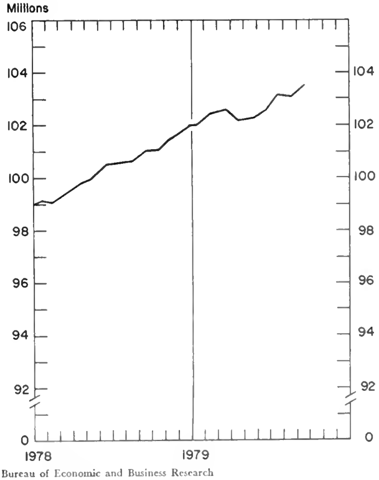
Monetary Change and the Economy

An extended period of time will be required before the economy will show the effects of the recent monetary change. Certainly, the change was introduced with as much fanfare as can be imagined. Moreover, as indicated, the aftershock on financial markets has been dramatic. In short, the seeds have been sown for a pronounced change in expectations.

For years, monetarists have advocated the type of stance Volcker has taken. The test of monetarist propositions may be at hand. The test, though proposed chiefly by academics, is not taken by academics. Instead, the consequences fall on the population at large — for good or for ill.

WILLIAM R. BRYAN

Civilian Labor Force



Bureau of Economic and Business Research

A Description of the Primary Wood-Using Industries in Southern Illinois

The primary wood-using industries of southern Illinois are those that purchase raw forest products. These industries produce lumber, veneer, timbers, cooperage, and dimension stock. The products of the primary industries are frequently used by other firms in the production of finished or secondary forest products such as furniture, wall paneling, packaging materials, and so on.

The data contained in this article were obtained by in-depth personal interviews. All known industries were included in the study.

In 1978, there were 37 primary wood-using firms in southern Illinois. Thirty-two firms were sawmills. In addition, there were two chip mills, a veneer plant, a handle mill, a firewood-processing plant, and a log home assembly plant.

In comparison 30 years ago there were approximately 200 sawmills, 9 container veneer mills, 4 box mills, 2 handle plants, and 4 charcoal plants (USDA Forest Service, Paper 123).

More than half of the firms in 1978 had been in operation under present ownership less than 10 years. This was the first year of operation for one-fifth of the plants. The oldest firm had been in operation 52 years. Two-thirds of the plants, in their first year of operation, began as "new" firms as compared with being purchased from prior owners or having been moved from another location.

Most of the firms were individual ownerships or partnerships. Four firms were part of larger wood-using corporations that were headquartered in surrounding states.

Capital investment varied from less than $10,000 to more than $2 million. Eighty percent of the firms had an original capital investment of less than $250,000, with nearly a third less than $50,000. The size of land area required for the plant and log yard was relatively small. All but one of the plants occupied less than 30 acres, with three-fourths using 10 or fewer acres.

Nearly two-thirds of the firms purchased less than 500,000 board feet of roundwood. Thirty percent of the firms purchased more than 1.5 million board feet. The primary wood-using industry in southern Illinois purchased approximately 45 million board feet of roundwood in 1978. The average purchase volume was slightly more than 1 million board feet. The total volume purchased in 1978 was the same as in 1947.

The firms generally were somewhat selective in the species of timber purchased. Only 12 firms bought both pine and hardwoods. One firm, the log home assembly plant, purchased only pine. The most popular hardwoods were oaks. Two sawmills, producing specific dimension stock (for handles and snow skis), specialized in hickory. Ash and pin oak were also singled out for selective purchase. It was of interest to find a few firms rejecting cottonwood sawlogs, although the veneer mill specifically procured cottonwood veneer logs.

The major source of roundwood was from private ownerships, with three-fourths of the firms procuring all or a portion of their timber supply from private lands. Roundwood delivered by loggers FOB at the mill served as a timber source for half of the firms. Only five firms obtained timber from federal lands, with three of these plants obtaining less than one-fourth of their total supplies via federal sales. Four firms obtained a portion of their roundwood from company lands.

Two-thirds of the firms procured most of their roundwood within the resident county. In a study of the timber buyer in Illinois, it was found that more than half of the timber buyers traveled less than 50 miles, one way, to purchase stumpage.

Three-fourths of the firms purchasing stumpage did all of their own logging, and 16 percent logged a portion of their stumpage purchases. The remaining firms subcontracted the logging of their stumpage purchases. This latter practice is becoming more popular with increases in (1) the costs of workmen's compensation and (2) government regulations.

More than two-thirds of the plants resold some of the roundwood purchases, especially veneer logs and specialty sawlogs. The volume resold varied from 3 percent to 33 percent. However, most firms sold less than 10 percent of their total timber purchases. More than two-thirds of the firms experience a slack procurement period during the winter season when the weather is very cold and wet conditions exist.

When asked "How have your procurement practices changed during the past five years?" the most frequent change given was the foregoing observation that firms were subcontracting their logging and/or purchasing more roundwood FOB at the mill. The second most frequent reply was the yarding of veneer logs and specialty sawlogs for reselling. A fourth of the plants replied that the available timber supplies were becoming smaller in both volume and size. However, one-fourth of the firms planned expansion of the volume of timber purchases.

Two final changes taking place in procurement practices were (1) less residue was being left in the woods due to the increasing demands for wood and firewood; and (2) there were fewer "gypo" loggers because sawmills can pay higher prices by reselling logs to veneer and export buyers.

The most frequent products produced by southern Illinois's primary wood-using industry were railroad ties, rough lumber, pallets, and mine timbers including ties, header boards, and matts. A few firms produced graded lumber, mill blocking, wood chips, and firewood. Specialty products included handle blanks, wood reels, hickory ski billets, veneer lumber, and log homes.

Nearly a third of the plants were limited in daily capacity by the scale and/or age of their equipment. Four firms indicated a shortage in the quantity and quality of available labor as a limiting factor to increased production. When asked "What do you consider the *greatest change* confronting your plant and what do you consider the greatest challenge confronting your industry during the next several years?" half of the firm spokesmen said a shortage of adequate (quantity and quality) timber supplies. Firm spokesmen also listed one or more of the following: (1) RARE II, proposed US Forest

Service wilderness areas; (2) federal and state regulations; (3) demand for products dependent upon an uncertain mining industry; and (4) inflation.

The market outlets used by the firms varied by product. Half of the plants marketed part or all of their products through wholesalers. Railroad ties and lumber were the products most often sold to wholesalers. One-half of the firms sold a portion of their products directly to customers and/or manufacturers, especially pallets and mine timbers. Retail sales were made by less than 5 percent of the plants.

More than 90 percent of the firms, not tied to parent firms, credit "word of mouth" as their major source of customers. Eighty percent relied totally on "word of mouth." Other means used to obtain customers included long-standing contracts, buyers, brokers, advertising, and their own salesmen.

Excluding the firms tied to parent firms, and the two specialty mills, the following market areas were found to exist. (1) Firms producing railroad ties and mine timbers sold their product within southern Illinois (generally resident and neighboring county). (2) More than three-fourths of the pallets were sold in the Chicago area. (3) Lumber was marketed in a 3- to 4-state area.

When asked, "What changes do you anticipate in your marketing practices during the next two years?" two firms' spokesmen indicated their firm planned to expand the variety of products produced through "new" product sales. The small number of responses suggests that the primary wood-using industry in southern Illinois plans no major expansion; but, on the other hand, does not plan major reductions in production.

The primary wood-using industry in southern Illinois in 1978 employed approximately 400 full-time people. The estimated annual payroll was more than $4.5 million. Seventy percent of the firms employed less than 10 full-time employees. Only 10 percent of the firms had more than 30 employees. Over the past five years the number of people employed by the primary wood-using industry in southern Illinois has remained relatively stable.

All but two firms utilized fine and coarse residue. However, only 40 percent of the plants utilized bark residue. The firms generally gave away or sold coarse residue for household fuel and/or the manufacture of fiber products. Thirty of the firms sold coarse residue to the pulp industry. The fine residue was generally given away or sold for mulch, livestock bedding, and so on. Only one firm used residue as a source of energy for operational purposes, other than burning for heat.

It is estimated that approximately 36,000 tons of fine residue and 54,000 tons of coarse residue resulted from the production of the primary wood-using firms in southern Illinois during 1978.

The following conclusions are warranted by the study findings: (1) The primary wood-using industries have a significant financial impact on the economy of southern Illinois; (2) The industry has been relatively stable the past 30 years, relative to raw material purchases, but the number of firms has declined; (3) The type of products manufactured by the industry generally utilizes relatively low-quality timber, with the veneer quality roundwood being resold to firms outside of southern Illinois; and (4) The supply of timber in southern Illinois could support an enlarged industry.

DWIGHT R. MC CURDY*

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Illinois Economic Indicators

The Bureau of Economic and Business Research has broadened the coverage of the leading indicator to include the effect of vendor performance. For this reason, the series has been revised for the period of November 1978 to the present. The leading indicator is now based on the following series: layoff rate, new housing starts, weekly hours, and vendor performance.

In the last few months the underlying series have behaved very well given the widespread view that a recession is on the way. Average weekly hours have actually increased on a seasonally adjusted basis from 39.5 hours per week in January to 41.1 in the most recent period. The layoff rate reached its lowest point in 10 years in September 1978 at 0.2 percent and remains now at 0.4 percent, which by comparison even with past periods of prosperity is very low. Housing starts are substantially lower than a year or two years ago, and are the only negative element in the index. We expect that this will worsen in the next few months.

The new element in the index, vendor performance, is at a relatively high level, having dropped a mere 10 percent from a year ago. In January 1975 — a previous slow period — the index was 37 percent below its present level. Overall the index shows the leading elements of the Illinois economy to be performing well.

CHUN-SANG CHEUNG

Local Illinois Developments

The Downstate Teachers' Retirement System has in recent years shown signs of increasing financial soundness, despite demographic factors which are currently working their way through the state's school system.

Of the five major public pension systems, the Downstate Teachers' Retirement is by far the largest. At the end of fiscal 1978 this system accounted for over 55 percent of the total assets of all the state-supported pension systems. The other major pension systems, which are supported in part by appropriations from state funds, include the State Employees' Retirement System, the State Universities Retirement System, the Judges' Retirement System, and the other member of the State Teachers' Retirement System, the Chicago Teachers' Pension and Retirement System.

Under the contributing method of financing state pension funds, contributions to the system are received from the employee and the employer (the State of Illinois). Employees contribute a portion of their salary with the contribution rate ranging from 4 to 11 percent depending upon the pension system and whether or not the employee participates in the federal social security program. Downstate teachers contribute 8 percent of their salary to the Downstate Teachers' Retirement System. The State is then required to pay the cost of an annuity over and above that provided through employees' contributions. The past practice of the State has been to appropriate an amount each fiscal year which is approximately equal to the estimated annual benefits paid by each system. Members' contributions and investment income are then invested with the purpose of increasing the asset base of the system.

Since 1974 total income of the Downstate Teachers' Retirement System has grown at a 15.1 percent average annual rate while total expenses of the system increased at only an 11.4 percent rate. This is quite a turnabout when compared with an income growth of 11.8 percent during the 1970–74 period while expenses were growing at over a 17 percent average annual rate. The main reason for this improvement is that the investment income of this system has grown at a 27.5 percent average annual rate over the past five years.

Another financial improvement of the system is related to its asset and liability structure. The asset base of the Downstate Teachers' Retirement System has grown at an average annual rate of 15 percent since 1974 while the liabilities of the system grew at only 8.9 percent. Viewed another way, while the assets of the Downstate Teachers' Retirement System have continually represented 55 percent of the total assets of the five state-supported pension systems, the liabilities of this system have proportionally dropped during the 1970s. In 1971 the Downstate Teachers' Retirement System accounted for over 65.6 percent of all state pension funds liabilities. By fiscal year 1978 their total liabilities structure accounted for 54.8 percent of the total liabilities of all state-supported pension systems. A related result is that the unfunded obligation of the State (the difference between liabilities and assets) has over the past five years grown at a 4.6 percent average annual rate for the Downstate Teachers' Retirement System compared with a 10.8 percent annual growth rate for all other state pension systems during the same period.

Even though the financial structure of the downstate system has shown improvement, it is believed by some that this system could be in financial trouble in years to come. This concern stems primarily from demographic factors and related legislation.

Enrollment of elementary school children has dropped some 16 percent nationally in the last decade. As the smaller birth cohorts of the mid-1960s have been reaching high school age, high school enrollments have begun to decline. High schools will thus increasingly experience the decreases in enrollment that have been occurring in elementary schools. The effects that this fact will have on the employment of teachers and thus the contributions into the retirement system is uncertain.

In an effort to stimulate the hiring of new teachers the State, as of August 1, adopted legislation which allows elementary and secondary school teachers with 20 years of experience to retire at age 55 without taking a cut in pension payments. The prior law penalized teachers that retired early by cutting the pension for each year not worked before age 60 by 6 percent.

According to the Illinois Education Association, about 6,000 of the state's approximately 110,000 teachers will be eligible for early retirement at the end of the current school year. The Downstate Teachers' Retirement System estimates that the no-penalty early retirement legislation will increase the state's share of the cost by some 1.2 million dollars per year downstate. This increase should have no effect on the state's ability to pay as it

[illegible] (millions)

	1970[a]	1971	[illegible]	1973	[illegible]	[illegible]	1976	1977	1978
Total receipts	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$ 599.9	$ 664.5	$ 755.0
Total expenditures	[illegible]	[illegible]	[illegible]	180.3	[illegible]	241.7	268.3	305.2	336.4
Asset balance	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,307.9	2,639.5	2,998.8	3,417.4
Liability balance	[illegible]	[illegible]	[illegible]	[illegible]	4,852.9	5,344.4	5,945.3	6,486.9	7,183.0
Total unfunded obligation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$3,305.8	$3,488.1	$3,765.6

Source: Office of the Comptroller

[a] Fiscal years 1970–76

Downstate Teachers' Retirement System Financial Data (millions)

	1970[a]	1971	1972	1973	1974	1975	1976	1977	1978
Income									
Member contributions	$ 70.7	$ 79.0	$ 90.6	$ 95.1	$ 101.3	$ 112.9	$ 121.2	$ 124.5	$ 132.2
State appropriations	57.8	60.1	58.6	92.0	96.7	130.7	138.6	157.0	175.1
Other employer contributions	1.9	2.0	2.6	2.9	3.3	3.7	4.3	4.7	5.4
Investment income and other	27.3	36.5	40.1	42.8	45.0	65.9	76.5	93.1	118.9
Total income	$ 157.7	$ 177.6	$ 191.9	$ 232.8	$ 246.3	$ 313.2	$ 340.6	$ 379.3	$ 431.6
Expenditures									
Retirement annuities	$ 49.9	$ 57.7	$ 68.4	$ 84.0	$ 98.6	$ 111.1	$ 123.3	$ 136.4	$ 149.0
Death benefits	2.4	2.9	3.3	3.9	4.4	5.0	5.2	5.8	6.7
Disability benefits	0.8	0.9	1.0	1.1	1.3	1.6	1.9	2.2	2.5
Refunds	10.1	11.1	11.2	12.9	14.6	14.8	14.1	19.6	21.6
Other	2.4	2.2	2.3	4.6	4.2	8.4	9.9	9.7	9.5
Total expenditures	$ 65.6	$ 74.8	$ 86.2	$ 106.5	$ 123.1	$ 140.9	$ 154.4	$ 173.7	$ 189.3
Total assets	$ 620.1	$ 722.8	$ 828.6	$ 954.9	$1,078.1	$1,250.3	$1,436.5	$1,642.1	$1,884.4
Total liabilities	$1,570.5	$2,483.4	$2,703.7	$2,926.9	$2,790.6	$2,964.1	$3,274.6	$3,518.1	$3,933.8
Unfunded obligations	$ 950.4	$1,760.6	$1,875.1	$1,972.0	$1,712.5	$1,713.8	$1,838.1	$1,876.0	$2,049.4

Source: Teachers' Retirement System

[a]Fiscal years 1970-78

will increase its share by less than one percent of current state appropriations to the system.

The Downstate Teachers' Retirement System has yet to feel the effects of either this new legislation or of declining enrollment. If either have an impact on the current financial growth the system is experiencing is a question which we will have to wait to answer.

Income and Employment Data

Each year the Bureau of Economic Analysis of the US Department of Commerce makes available to the Bureau of Economic and Business Research its estimates of personal income and employment for the counties of the State. The reports give data for the second year before and several earlier years; the recently received 1979 reports include the income and employment data for 1972 through 1977.

The BEA bases its estimates primarily on administrative records of federal and state government programs, with additional information from various censuses or from nongovernment sources. The most important sources are the state unemployment insurance programs, the Social Security Administration insurance programs, and the Treasury Department's tax programs. Census data include surveys that are part of the Censuses of Agriculture and Population.

Personal income is defined as current income of residents of an area from all sources. It is measured after deduction of personal contributions to social security, government retirement, and other social insurance programs but before deduction of income and other personal taxes. It includes income received from business, federal, state, and local governments, households and institutions, and foreign governments. Personal income consists of wages and salaries (in cash and in kind, including tips and bonuses as well as contractual compensation), various types of supplementary earnings termed other labor income (the largest item being employer contributions to private pension, health, and welfare funds), the net incomes of owners of unincorporated business (farm and nonfarm with the latter including the incomes of independent professionals), net rental income, royalties, dividends, interest, and government and business transfer payments (consisting in general of disbursements to persons for which no services are rendered currently, such as unemployment benefits, social security payments, medicare benefits, retirement pay of governmental programs, and welfare and relief payments).

The BEA employment series measures the number of full- and part-time wage and salary employees plus the number of proprietors of unincorporated businesses. The latter includes farmers, independent professional practitioners, nonfarm business entrepreneurs, and others in self-employment status. The employment estimates are generally comparable in quality with BEA's estimates of labor and proprietors' income. They are mostly based on the same data sources and derived by the same general estimating procedures. However, unlike labor and proprietors' income, employment is measured in terms of place-of-work; no residence adjustment is made.

Detailed BEA income and employment data are available for each of the 102 counties and 10 SMSAs of Illinois for 1971 through 1977. A charge of $20.00 will be made for the entire set. A minimum charge of $2.00 will be made for individual county requests totaling 3 counties or less, and $1.00 per county for additional counties requested. A charge of $12.00 will be made for the 1977 transfer payment data for the 102 Illinois counties. BEA farm income and expenditure information for each county in Illinois is also available for $15. Those interested may write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801. Please make check payable to the University of Illinois.

Government Payments to Illinois Farmers Decline

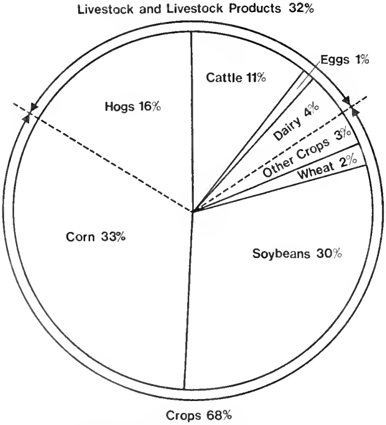
Cash receipts from marketings of crops, livestock, and livestock products are the major source of income for Illinois farmers. In 1977 cash receipts for crops totaled over \$3.9 billion, compared with the \$2 billion from livestock. Illinois marketings represented over 5 percent of the total US cash receipts for both categories, which puts Illinois fourth among the United States in the sale of all farm products. Illinois was the leading state in cash receipts from corn and soybeans and the second leading state from the sale of all crops. Cash receipts from Illinois crops increased nearly 100 percent in the last decade, while those from livestock rose about 40 percent. The major portion of this increase occurred in 1973 with livestock and crops rising by 22 and 38 percent, respectively.

Recent trends in cash receipts do not present an equally favorable outlook on the incomes of all types of Illinois farms. Cash receipts from livestock marketings rose by 5 percent from 1974 to 1977, but increased by less than 2 percent between 1976 and 1977. Crop marketings displayed a less favorable trend, with cash receipts remaining unchanged or declining between 1974 and 1977.

Government payments constitute another relatively important but declining source of income to Illinois farmers. The government payments allocated directly to Illinois farmers are from farm programs such as the Feed Grain, Wheat, Agricultural Conservation, and Wool Incentive Programs. Over half of the farmers in Illinois are not eligible for government assistance because they do not participate in the land set-aside program, or produce feed grains or wheat (see chart). Government payments, designed to control production, are inversely related to agricultural prices, and hence are sensitive to world market conditions. The increase in foreign demand for Illinois agricultural products in the early 1970s is reflected in the sharp increase in Chicago feed grain prices. Coincident with the price increase is a reduction in the percentage of feed grain production put under government support and a decline in the support price per bushel. For example, the quantity of corn put under support in the US fell from 420 million bushels in 1973 to 77 million bushels in 1974, while the support price fell from 70 to 51 percent of parity. The combined effect reduced government payments to US farmers over 86 percent.

A similar pattern is found in Illinois. While government payments to Illinois farmers totaled nearly \$200 million in 1969, by 1977 they had declined to only \$32 million. This figure represents less than 30 percent of the 1969–77 average. Government payments to Illinois farmers reached a peak in 1972 at \$244 million and fell to less than \$10 million in 1974 and 1976.

Illinois Cash Farm Income by Commodities, 1977



Source: Illinois Agricultural Statistics, Bulletin 78-4

County Income Estimates

Farming is more profitable in McLean County than anywhere else in the state. Recent farm income estimates indicate that McLean County generated total farm income in excess of \$64 million, followed closely by Livingston, Iroquois, and Champaign counties. Total farm income is derived by subtracting production costs from cash receipts, government payments, and other farm income (imputed income and rent received). Cash receipts from McLean County livestock marketings were over \$25 million in 1977, slightly less than the 1969 figure. Livestock marketing receipts averaged \$26 million in the last decade, reaching a high of \$30 million in 1973 and 1975, and a low of \$23 million in 1972. Cash receipts from crop marketings have displayed a significant upward trend since 1973 when receipts totaled nearly \$116 million, a 40 percent increase from 1972. Crop receipts were over \$164 million in 1977, down nearly 10 percent from 1976.

The declining trend in government assistance to farmers is evident in McLean County. Government payments to McLean County farmers reached a 1972 peak of \$5.3 million before plunging to \$100 thousand in 1976. On average, McLean County received \$4.3 million in government payments annually between 1969 and 1973, and only \$200 thousand annually from 1974 to 1977.

Farm income and expenditure estimates for Illinois counties from 1969 to 1977 are now available. A fee of \$15 is charged for the entire set with a minimum charge of \$2 for requests for five counties or less. Inquiries should be addressed to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801.

SUSAN J. LINZ

Era Ends in the Telephone Industry

Illinois is unique among the states because every facet of its telephone industry, from research and development of new electronic equipment to warehousing final products, takes place within the State. The direct economic contribution of the telephone industry in Illinois is substantial, yet employment is tapering off as the industry becomes increasingly electronic.

The concept of scale economies is often associated with the telephone industry because there are overhead expenditures which must be undertaken on a certain scale before any service can be provided. The overhead costs of installing the main cables and wires, for example, have the same scale regardless of the subsequent number of phones put in operation. The advantages of expanding productive capacity to increase output at proportionately lower average costs are evident in Illinois. The telephone industry is divided up into companies classified by average annual operating revenues. Of the 54 telephone companies in Illinois, 31 have average annual operating revenues exceeding $250,000 (class A companies), and 17 fall within the $100,000–$250,000 range (class B companies). The remaining corporations are organized on a cooperative basis for the furnishing of telephone services.

Operating Statistics

The telephone industry is expanding. Illinois telephone companies operated 974 exchanges in 1978 to serve the state's 9.9 million telephones (up from 8.7 million in 1974). Approximately 5.2 million of the state's telephones are main stations (one line serving one telephone) and 4.7 million are extensions. Operating revenues for the entire telephone industry in Illinois total about $2.5 billion, up from $1.9 billion in 1975.

Two firms, Illinois Bell and General Telephone of Illinois, dominate the telephone industry in the State. However, the Illinois Commerce Commission estimates that the remaining class A telephone companies in Illinois operate nearly 340 exchanges and account for over 455,000 main stations. This subset of class A telephone companies generates net income of about $26 million, or $57 per main station annually, and pays Illinois taxes of about $16 million, or $35 per main station each year.

Illinois Bell dominates the more populated regions of the State. Wholly owned by AT&T, it serves over 3.3 million customers with some 8 million phones, and employs over 37,000 people in the State. Operating 229 exchanges, Illinois Bell generates net income of about $243 million, or $57 per main station, and pays Illinois taxes in excess of $15 million annually, or about $3.60 per main station. The entire Bell System — Illinois Bell, Western Electric, AT&T Long Lines, Bell Telephone Laboratories, and Teletype Corporation — employs over 59,000 people and spends more than $2.4 billion a year in Illinois. Total payroll, the biggest single expenditure of the Bell System, reached $1.2 billion in 1978. Purchases ranked second at $586 million, and local taxes third at $250 million. The economic impact of the Bell System in the State is augmented by the dividends that AT&T pays to shareholders in Illinois, which totaled over $202 million in 1978.

General Telephone of Illinois is the second largest telephone company in the State, operating 327 exchanges which service nearly 485,000 main stations and 393,000 extensions. General Telephone generates net income of about $34 million annually, or $70 per main station, and pays Illinois taxes of $2.4 million each year.

Class B telephone companies operate slightly more than 2 percent of the total number of telephone exchanges in the State, to serve about 10,000 main stations and 6,000 extensions. Combining all Illinois class B telephone companies yields a net annual income figure of about $450,000, or $42 per main station. These companies add over $22,000 annually to Illinois tax revenues. Moultrie Independent Telephone Company is the largest class B company in the state in terms of total operating revenues, generating $236,000 in 1978.

The six cooperative telephone companies in Illinois operate 61 exchanges, servicing nearly 22,000 main stations and 13,000 extensions. These companies generate net income of $545,000, or $25 per main station, annually.

Recent Developments

An era ended in 1978 when the last manual central office in the Bell System was retired and replaced with a modern electronic switching system. Switching equipment is central to the telephone network. It registers the phone number a customer dials and performs the necessary steps to connect the two parties. About 30 percent of the Bell System telephones have been converted from electromechanical to electronic switching systems. Indeed, these new electronic switching systems, manufactured by the Western Electric facilities in Lisle and Chicago, were being installed in 1978 at the rate of about one per day. Their advantages over the older systems include greater speed and reliability, and lower operating and maintenance costs. For example, electronic tandem switching, designed for stored program control, allows large corporations with widely scattered locations to control and monitor their networks from centralized consoles.

Electronic components are the building blocks of the telephone industry. Among the new electronic products is a microprocessor designed especially for telecommunications use. The microprocessor, about one-tenth the size of a postage stamp, contains 7,000 transistors and has the information-processing capability of a computer.

The Bell System has also been conducting a service trial of its lightwave transmission system in Chicago. This system uses lasers and light-emitting diodes to transmit voice, data, and video signals on hair-thin glass fibers.

SUSAN J. LINZ

Comparative Economic Data for Selected Illinois Cities, August 1979

	Building Permits (000)		Electric Power Consumption (000,000 kwh)		Postal Receipts (000)		Employment (000)		Estimated Work Force Unemployed (percent)	
	Aug. 1979	% change from Aug. 1978	Aug. 1979	% cbange from Aug. 1978	Aug. 1979	% change from Aug. 1978	Aug. 1979	% change from Aug. 1978	Aug. 1979	Aug. 1978
ILLINOIS	$ 161,571[a]	+0.7	3,718.4[a]	-1.3	$ 46,955[a]	+9.4	4,898.4	-3.9	4.6	6.0
NORTHERN ILLINOIS										
Chicago	$ 118,970	+17.1	1,782.1	-4.2	$ 36,511	+12.6	3,328.6[b]	+1.8	4.4[b]	5.9
Aurora	3,584	-36.7	148.5	-7.4	566	+4.0	39.0	+3.1	3.6	5.8
Elgin	3,418	+229.9	97.5	+6.6	563	-7.8	28.5	+2.1	4.2	6.2
Joliet	3,179	-19.1	392.6	+2.0	339	+6.9	47.7	+2.1	4.4	5.7
Kankakee	435	-52.4	78.4[c]	+5.6	195	-10.5	37.8[b]	-1.8	7.3[b]	7.5
Rock Island-Moline	4,715	+24.9	138.3[d]	+6.2	1,221	+9.3	110.4[b]	+3.5	3.5[b]	5.3
Rockford	2,724	-30.5	159.3	-4.6	850	+4.6	133.0[b]	+2.3	4.5[b]	5.1
CENTRAL ILLINOIS										
Bloominton-Normal	$ 3,952	-28.0	58.3	+3.9	$ 880	-1.7	56.4[b]	-3.4	2.7[b]	3.8
Champaign-Urbana	1,775	-52.2	62.5	+8.6	594	+0.5	74.7[b]	+7.1	3.7[b]	5.0
Danville	2,739	+209.1	48.0	+1.2	211	+0.4	19.4	+3.1	6.0	7.8
Decatur	2,935	-68.2	141.4	+1.4	489	-10.4	56.0[b]	-0.7	5.6[b]	9.4
Galesburg	659	-28.6	32.4[c]	-2.7	158	+10.4	15.9	-1.8	7.9	6.6
Peoria	3,784	-64.2	211.5	-4.1	1,361	+7.6	170.8[b]	+0.4	3.8[b]	4.8
Quincy	1,272	+36.6	47.1	+6.0	214	+0.4	20.0	-1.4	4.6	6.8
Springfield	5,711	-2.5	146.5	+2.7	1,903	-6.8	96.4[b]	-1.5	4.5[b]	5.8
SOUTHERN ILLINOIS										
East St. Louis	$ 282	+297.1	27.3	-11.9	$ 175	+1.1	23.2	+4.0	11.4	12.0
Alton	535	-19.6	83.9	-3.3	126	+5.8	15.7	+3.9	6.9	8.9
Belleville	472	-27.3	32.9	-6.0	285	-27.6	20.3	+4.6	4.8	5.1
Carbondale-Murphysboro	430	-8.7	40.3	+4.9	314	+7.5	13.7[e]	-3.5	7.5[e]	10.2

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory. [d]Includes East Moline.
[e]Data for Carbondale township.

The World Bank and the International Development Association: Increased Food Production II

ROLAND W. BARTLETT

This is the conclusion of the article of this title published in the October issue of this review.

To become self-sufficient in times of food shortage, a country must have adequate transportation. The World Bank/IDA has given high priority to projects for improving roads, rivers, railroads, and ports for both water and air. In 1978 there were 34 projects in 29 countries centered on improving transportation. Total costs for these in 1978 were $5.1 billion. World Bank/IDA loans and credits for these projects were $1.1 billion or 22 percent of the total.

One project initiated in 1978 forms an important part of the overall development of northern *Cameroon.* It serves several agricultural, industrial, and administrative centers in the country. Another in *Egypt* will increase the depth of the Suez Canal so that by 1980 it will accommodate ships with a gross weight of 470,000 tons drawing water up to 53 feet in depth. A third 1978 project on the *Ivory Coast* will include the improvement of the roadbed of the Regiedes Chemin de Fer, the purchase of locomotives, and provision for maintaining equipment and training facilities for the railroad.

In developing countries, large amounts of capital are necessary to develop industries and services needed for improving living standards. In 1978 the World Bank/IDA had 25 projects in development of finance companies in 19 countries. A total of $1,174 million was made available, four-fifths of which came from the World Bank/IDA. Power distribution lines, road improvements, and water transmission will be provided in *Colombia.* As a result of this project both exports and employment will increase in Cartegena, the capital of one of the country's poorest states. In *Upper Volta* credit and technical assistance to artisans and small and medium-sized enterprises will be provided. In *India* high-priority industrial projects located in low-income areas will be helped financially, which will help increase exports.

Distribution of World Bank Loans and IDA Credits, and Total Costs of Major Projects, 1978

Major projects	Bank loans and IDA credits (millions)	Total costs (millions)	Percent loans and credits were of total costs
Agriculture and rural development	$ 3,269.7	$ 13,568.18	24%
Electric power	1,146.2	5,412.88	21
Transportation	1,092.9	5,056.68	22
Development finance companies	909.9	1,174.15	77
Industry	391.8	1,651.53	24
Water supply and sewage	375.2	1,830.97	20
Urbanization	368.6	779.72	47
Education	351.9	620.64	57
Telecommunications	221.1	1,192.0	19
Nonprojects	155.0	188.6	82
Population and nutrition	58.1	137.5	42
Tourism	50.0	242.0	24
Technical assistance	20.3	29.8	68
Grand total	$ 8,410.7	$ 31,884.65	26%

Source: World Bank Annual Report, 1978, pp. 28-32, and 72-90.

As a developing country grows, it begins to produce manufactured goods to decrease imports. Eight industrial projects were initiated in 1978 within eight countries. The total cost for these projects was $1.7 billion; the World Bank/IDA loans and credit were about one-fourth of the total.

Romanian industries were badly damaged by a March 1977 earthquake. One project of the World Bank in 1978 was to aid in reconstruction, including funds furnishing specialized equipment for a National Center for Earthquake Engineering. In *Brazil* funds were provided for the construction of a plant to produce ethylene, propylene, butadiene, benzine, and other protochemical derivatives. Once in production, this plant will reduce imports of these products.

A safe water supply and an adequate sewage system are necessary to improve living standards. The World Bank/IDA in 1978 had 16 such projects in 14 countries. Total cost was $1.8 billion. World Bank/IDA's share was one-fifth of the total.

In 1978, the World Bank initiated a project to increase production of potable water and improving the water system serving the *Lisbon* region; 2.6 million people including about 300,000 urban poor will benefit from this project.

An IDA project in *Haiti* will rehabilitate and expand the water supply in seven provincial towns benefiting about 155,000 people, most of whom are low-income people.

Cities as well as rural areas need capital to bring about improved living standards. Thirteen projects in 13 countries were granted loans or credit in 1978; total cost was $786 million. The World Bank/IDA gave loans or credit for 47 percent of the total. One project in *Bolivia* will provide essential services in low-income areas of La Paz in construction of five retail food markets, credit to small-scale enterprises, and employment, benefiting around 10,000 families. A project in *Morocco* provides for squatter upgrading, improved employment, and equipment for community service.

Major emphasis on education is important in all countries, particularly those with low incomes. The World Bank/IDA have been giving attention to educational projects which will bring about improvement. In 1978, there were 20 projects for improving education in 20 countries at a total cost of $621 million. World Bank/IDA loans or credits were 57 percent of the total. In *Algeria* civil engineers and technicians were supplied to alleviate the shortage of this personnel; this included a workshop for an expanded network of vocational training centers. In *Honduras* a project to improve the quality of primary education in rural areas and to train specialized people in agriculture and forestry was started.

(Continued on next page)

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(Continued from page 11)

In 1978, curriculum development, teaching aids, and regional centers for adult education was begun in *Somalia.*

Telephones, television, and radios are a prerequisite to improved living standards in developing countries. In 1978 the World Bank/IDA initiated 5 projects in 5 countries. They contributed about one-fifth of the total cost of $1,192 million. In *El Salvador* the installation of additional local automatic telephones, long-distance equipment, and teleprinters in areas currently without service will be made possible. One hundred isolated locations will be provided with local telephone service in *Nepal* with funds from another project. The World Bank is working with the Indian government in a program to add more than a half million lines in India between 1977 and 1979.

Improved living standards for developing countries are dependent, in part, on improved nutrition and family planning. Two World Bank/IDA projects in two countries were started in 1978; the total cost will be $137.5 million, including a loan of $58.1 million from the World Bank.

Illinois Business Indexes

Item	Aug. 1979	July 1979	June 1979	May 1979	Aug. 1978
Leading indicator (1969=100)	94.6[a]	94.3	93.8	93.6	96.3
Coincident indicator (1969=100)	161.1[a]	161.5	160.9	159.7	155.8
Employment-manufacturing (in thousands)	1,240.0[a]	1,240.9	1,254.3	1,244.7	1,234.5
Average weekly hours-manufacturing	40.9[a]	40.5	41.0	40.6	39.9
Weekly earnings-manufacturing	$301.8[a]	$298.1	$299.5	$293.2	$271.1
Layoff rate-Chicago	n.a.	0.4	0.5	0.5	0.3
Ordinary life insurance sales (in millions)	$1,511	$1,476	$1,476	$1,548	$1,329
Retail sales (in millions)	n.a	$3,779[a]	$4,011	$4,090	$3,742
Coal production (in thousands)	5,535	3,661	5,600	5,581	5,774
Petroleum production (in thousands)	1,880	1,880	1,825	1,945	2,043
Vendor performance (percent)	55	60	70	76	65
Building permits (in thousands)					
Residential housing units	4.54	3.74	5.47	6.10	6.435
Value of residential housing	$191,514	$162,921	$234,120	$240,011	$252,546
Value of nonresidential housing					
Industrial buildings	$39,031	$55,019	$44,102	$58,435	$47,995
Office, banks, and professional buildings	$59,559	$57,941	$59,636	$51,624	$34,010
Stores and other mercantile buildings	$27,375	$36,932	$30,894	$43,665	$56,984
Other	$111,924	$98,707	$38,396	$61,768	$32,009
Consumer price index					
North Central US	120.3	n.a.	117.7	n.a.	106.5
North Central/population more than 4,000,000	121.0	n.a.	118.2	n.a.	106.4
North Central/population 385,000 to 1,250,000	120.5	n.a.	118.0	n.a.	107.3
North Central/population 75,000 to 385,000	119.0	n.a.	116.8	n.a.	106.1
North Central/population less than 75,000	119.5	n.a.	116.6	n.a.	106.9
St. Louis	n.a.	216.9	n.a.	211.1	n.a.
Chicago	218.6	217.4	213.5	210.1	190.9
Farm prices	112	120	118	117	108
	1979:I	1978:IV	1978:III	1978:II	1978:I
Personal income (in millions)	$104,625	$101,770	$99,795	$97,371	$94,325

Sources available upon request.
[a]Preliminary. n.a. not available.

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What's Wrong With Workers' Compensation? The Lump-Sum Payment?

ALLAN J. HARRISON

There is really no serious dispute in the US regarding the purposes of a workers' compensation system. As stated by the National Commission on State Workers' Compensation Laws, the program should provide all injured or diseased workers with (1) complete appropriate medical care; (2) physical and vocational rehabilitation; and (3) continued earnings. An effective system would also (4) encourage safety; and (5) deliver benefits "in an efficient manner." The commission, however, apparently failed to consider adequately the most serious obstacles to accomplishing these goals. This becomes most obvious in a state such as Illinois, where the law was revised, in large part, based on the National Commission's recommendations. Although the law was properly modified for certain administrative changes such as allowing an employee a choice of his own doctor, and was also greatly altered to increase benefits, fundamental institutional relationships in the workers' compensation system — relationships which frustrate all of the foregoing goals — were not altered.

Whether paid as an award as a result of a hearing or reached in compromise with the employer or his insurer, the nexus of these problematical institutional relationships is the lump-sum payment or lump-sum settlement for permanent partial disability or impairment. The lump-sum settlement provides the economic incentive for a host of problems created by the activities of legal and insurance institutions. Indeed, the useful functions of these institutions have been greatly distorted by the lump-sum settlement system. Although the problems may be exaggerated, examining the Illinois system makes clear the harmful defects of the present system as they occur in varying degrees throughout the nation.

Allan J. Harrison is professor at the Institute of Labor and Industrial Relations, University of Illinois. He has been working with occupational safety and health policy and worker's compensation since the passage of the Occupational Safety and Health Act. He has produced a handbook, *Questions and Answers on Illinois Workers Compensation,* which has been widely distributed throughout the State and is in its fifth printing. This article is primarily the result of extensive discussions with people directly involved in the day-to-day problems of Illinois workers compensation; it also is in part the result of a sabbatical in England and Germany which permitted the comparison of work safety, health, and worker's compensation programs with those of the US.

Complete Appropriate Medical Care

The Illinois law permits an employee to choose his own doctor and to receive full payment for any and all medical care. Employers' and employees' concern over the ultimate settlement have, however, led to the selection and reselection of doctors and to medical treatment and examination based not mainly on medical need but on the high-stakes game of the amount to be paid for partial disability.

Since, in any serious injury, the ultimate settlement is largely based on medical evidence indicating the percentage of disability in a given limb or organ, knowledgeable and calculating employers, employees, and representatives of both, jockey from the outset to obtain a physician who is either very conservative or very liberal in his estimates of impairment. Ironically the company-selected physician exaggerates his effectiveness while the employee's doctor minimizes his. Medical prognosis, then, replaces medical performance as the standard for selecting an attending physician. There is no independent judgment of the doctor's expertise or effectiveness in actually *treating* industrial injury or disease, and the extent of recovery is not the basis for his selection and retention.

As a consequence, many Illinois employers continue to have company doctors for referral purposes, and although employees may select their own doctors at the company's expense, most are urged to go to the company

The Tokyo Round: Results and Implications *By S. G. Schmidt / Page 9*

doctor. Likewise, unions and employee attorneys have particular doctors to whom they guide injured workers.

In Illinois and nearly all states, the judgment on percentage of disability is determined not by a medical specialist, but by a layman employed by the appropriate state agency to act as a hearing officer or arbiter in the matter. In reaching his decision, he uses the medical evidence, some institutionalized rules of thumb, and other evidence which is only tangentially related to the actual extent of disability. The evidence of one party is thrown against the evidence of the other, and the state arbiter, in Solomon-like wisdom, cuts the baby somewhere in between. Unfortunately, in the process of developing the medical record and other evidence bearing on the extent of disability, the worker's care becomes a secondary concern.

Since an Illinois employee is not required to remain with one doctor, his attorney may advise him to keep changing physicians until the "right one" is discovered. And, even in states not requiring an employer to pay for any doctor, an injured worker often seeks, at his own expense, a doctor who will better the evidence in his case.

The employer, on the other hand, may apply pressure from the outset to get his employee to go to the company doctor. At a minimum, the law permits the employer to require examinations by a medical specialist of his choosing. Thus, activities that are dysfunctional are encouraged by the present system.

Physical and Vocational Rehabilitation

Real rehabilitation is obviously not encouraged in such circumstances, as there is no objective examination and evaluation of the employee's progress but only the self-serving submissions of two litigious parties attempting to persuade a layman to cut the permanent disability cake in their favor.

Other factors also work against both physical rehabilitation — the restored use of all faculties — and vocational rehabilitation — the restoration of the employee's ability to hold gainful employment comparable with his previous work.

Whether explicitly recognized or not, the award of permanent partial disability is influenced by the amount of time an employee is unable to work at the time of his injury — that is, the length of temporary total disability. Consequently, there is an attempt to get a worker back in the plant, mine, store, or office as soon as possible, regardless of his ability to perform any real work. This sham does nothing for an employee's respect for his employer, and more important, may interfere with the worker's receiving proper physical therapy and vocational retraining where they may be necessary. There are also, of course, employees who hang back from returning to work and resist treatment that would expedite their return as full participants in the work force. Why? Because they have learned, or been told, that this pays big dollars in the final settlement. Again the emphasis is distorted by legal gamesmanship.

Finally, there is great resistance to the reemployment of seriously injured employees, although reemployment is the basic factor in successful vocational rehabilitation. And payment of a large lump-sum settlement constitutes an implicit assumption that reemployment is not realistically expected. It would appear in many instances that if the money spent on litigation to obtain such settlements were used instead to ensure the worker's reemployability, a primary purpose of workers' compensation legislation would be advanced.

Continued Earnings

Due to the 1975 amendments which attempted to bring Illinois law into line with the National Commission's recommendations, it can be said that income has been maintained for the temporarily totally disabled. Because of the incentives latent in the lump-sum settlement approach, however, this cannot be said with certainty for either death or permanent total disability cases. It is still more questionable in the case of permanent partial disability.

Through the ignorance of many surviving dependents and the permanently totally disabled employee, the cupidity of some lawyers, and the fundamental policy of insurance companies, many of the totally disabled and the survivors of death cases never obtain their proper entitlement of continuing benefits adjusted annually for inflation. Since insurance companies do not wish to have an unspecified indeterminate liability, they willingly dangle a large sum (albeit much less than they would ultimately have to pay) before the permanently totally impaired and the dead employee's survivors. Although no reputable attorney would take any substantial portion of benefits due in such cases, there are some, as in any field, who are not quite so ethical. Clients are sometimes encouraged, contrary to their own best interest, to settle for lump sums, so that their lawyers may more readily collect large fees.

In cases of permanent partial disability, there seems little question that a seriously injured employee who accepts a lump sum is actually receiving an amount completely unrelated to his future loss of earnings. In some cases it may be greater, in some less, but the present system is not designed to compensate for long-term loss of earnings realistically. Also, lump-sum settlements

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usually require an employee to release his rights to future medical care related to his injury.

There is, however, a provision in Illinois law that allows the employee an option called "Partial Incapacity to Pursue Usual Employment." This provides for the payment of two-thirds of the difference between his previous earnings and the wage he receives at his new employment. Experience shows that injured employees are seldom advised of this aspect of the law, and for all intents and purposes, it is an unknown provision. That injured workers are rarely told of this choice may be explained by the fact that this alternative eliminates any lump-sum payment and, at a minimum, complicates the attorney's claim to some portion of the settlement.

Lump-sum payments, then, are often a poor solution for the individual worker and sometimes costly for the general public. Although a lump sum is supposedly offset against social security, the success of this mechanism depends entirely on an individual recipient's admitting that he has received workers' compensation. The National Commission found that 10 times as many people were receiving social security for work-related permanent total disability as had received workers' compensation awards for permanent total disability. This, of course, is subject to various interpretations. Many people settle for less than total disability, and social security is undoubtedly much freer with public money than insurance companies are with theirs. But it is hard to resist the possible conclusion that social security is being used as a back-up fund for injured employees who take their lump-sum money and run. Consequently, both social security and the employee lose.

Encourage Safety

The present litigious system has the added deleterious effect of, at a minimum, confusing and, more often, destroying, the relationship between the costs of workers' compensation cases and the actual safety record of the company. A company's experience in terms of costs is as apt to result from extraneous factors as it is likely to reflect the actual accident and sickness situation. Many factors contribute to the destruction of that relationship.

(1) Intimidation — some employers and/or insurers have been known to use intimidation to frustrate an employee's rights under the law. Large, but untold, numbers of employees never file any claims at all through fear of employer retaliation. Neither the law nor the insurance system has any effect on this fear, and the result is a payment system based not on accidents and disease rates, but on the lack of ethical behavior of an employer and/or his insurance carrier.

(2) Ignorance — in many states the burden lies entirely on the employee to pursue his rights, and many have not the slightest idea what those rights are. Again, neither the administration of the law nor insurance institutions encourage employee knowledge in this matter. The greater the ignorance, the less the cost.

(3) In combating the elements of intimidation and ignorance, an active, informed union can make a great difference in whether claims are pursued or not. Thus the existence of such a union can result in increased costs which do not reflect a greater incidence of injury and illness, but a more frequent pursuit of cases.

(4) The amount of any given award today depends on the presence, and relative abilities, of attorneys for the contesting parties. Again, the cost bears no relationship to the actual safety record of the employer.

(5) As previously discussed, the type of doctor consulted and the evidence he presents are both critical to the resolution of disputed cases. Again, there is no relationship to safety conditions.

(6) Finally, hearing officers in the State of Illinois are political appointees whose expertise may vary greatly. Thus, substantially different awards for the same injury may occur and this again, is unrelated to actual conditions.

In summary, the present system not only fails to deliver the desired level of worker benefits, but fails to provide an incentive for safety.

Deliver Benefits "in an Efficient Manner"

Additionally, the system renders impossible the fulfillment of the goal of efficiency — which, simply stated, is to maximize the percentage of the employers' dollars paid for workers' compensation which actually goes to provide employee benefits of medical care, rehabilitation, and income. Obviously, attorneys' fees and insurance administration costs take a big bite of those dollars, and the unnecessary or inappropriate use of doctors consumes still more. Finally, the lump-sum method of paying off claimants cannot be the best way of accomplishing society's main goal — getting the injured employee back to work as a contributing member of society rather than throwing him on social security. Such a system both sacrifices the productive potential of the individual and increases the costs of the productive part of society that pays for social security.

Finally, the present system means that today workers' compensation claims are handled like other claims in litigation and the peculiar nature of workers' compensation is not recognized. Consequently, the insurance industry does not specialize in it to any great degree, and it is just one of many risk insurance services provided to private industry. Were fewer more specialized insurance institutions involved, they could provide services to enable employers to prevent accidents and provide rehabilitation. The present system provides little incentive for such specialization.

Recommendations

The following recommendations for improvement are perhaps too utopian, as they would entail confrontations with powerful lobbying institutions in any state: the bar association, the insurance industry, and possibly the medical association. The accomplishment of the first of these recommendations, however, is presently within the capability of organized labor, or could be within a brief period of time.

(1) Organized labor should, as it has for many years in England, train its own personnel to represent em-

ployees in workers' compensation cases. When there is no question that a given injury arose from employment, the law is neither so difficult nor are the facts, aside from medical, so often in dispute that they cannot be handled by a layman. Certainly anyone able to present grievance arbitrations competently is also competent to present nearly all workers' compensation cases. Indeed, unions presently often do much of the lawyer's work gratis. This could be made quite attractive to employees both in terms of results and costs. Rather than charging on a percentage basis, the union could charge on an hourly basis with established flat minimums and maximums. The service would easily pay for itself. And, by removing many attorneys from the process, except in those highly difficult cases requiring an attorney's assistance, it would eliminate the chief benefactors and proponents of the present system.

(2) Lump-sum settlements should not be permitted except in very rare cases, such as that of a retiring worker. In permanent partial disability cases the existing option of awarding two-thirds of the difference between the employee's present wage and his new earnings should become the rule rather than the rare exception. The award should be reviewed regularly, perhaps every three to five years, to permit adjustments for the employee's lack of, or continued, improvement. Legal fees or fees to the employee's representative should be based on the amount of time actually spent on the case, and should be paid by the employer. The fees and their payment should be a clearly stated part of the award, and in case of controversy, the arbiter should be empowered to determine the appropriate fee.

(3) Medical care should be provided only by certified specialists recognized as professionals in the fields of industrial injury and disease by both labor and management. From among these certified specialists, an employee might choose his doctor. In small communities where such specialists are not available, the employee would first, of course, receive treatment from his local physician. If the percentage permanent disability system has not been completely eliminated by change to the two-thirds option award, he might then choose one of the recognized specialists to certify his degree of disability.

(4) The state, in cooperation with labor and management, should establish a single insurer for all employers; that insurer should be governed by a body consisting of equal numbers of labor and management. Along with its more usual insurance functions of collecting premiums and paying claims, the insurer would also (1) experience-rate every employer and adjust his rates accordingly; (2) provide free safety and health consultation to both labor and management at either's request; (3) establish and maintain rehabilitation facilities; (4) provide training in health and safety; and (5) accredit health and safety specialists and review the performance of doctors specializing in industrial health and safety. Lacking provision for a monopoly, such a state insurer should be established to compete with the present private system.

Although these recommendations require a degree of legislative courage not often encountered, without such fundamental reform the goals established by the National Commission will never be achieved. It is indeed ironic that those who are most victimized by the present system, employers and employees, seem to be hopelessly locked in a political confrontation that has little to do with the system's inherent shortcomings. They have permitted those hired to serve their interests, lawyers and insurance institutions, to become instead the masters and chief beneficiaries of the system. Moreover, since the attorneys and insurers are the primary information sources for not only employers and labor, but also elected officials, it is extremely unlikely at this time that basic change will receive a hearing, let alone a chance. Yet there is always a possibility that labor and management will awaken to their and to society's self-interest. When that occurs, fundamental change cannot be far behind.

Illinois Business Indexes

Item	September 1979	August 1979	July 1979	June 1979	September 1978
Leading indicator (1969=100)	94.6[a]	94.2	94.0	93.7	96.4
Coincident indicator (1969=100)	157.4[a]	158.1	160.0	160.4	156.0
Employment-manufacturing (in thousands)	1,240.5	1,239.1	1,240.9	1,254.3	1,240.9
Average weekly hours-manufacturing	41.5	40.9	40.5	41.0	40.2
Weekly earnings-manufacturing	$309.0[illegible]	$301.87	$298.1	$299.5	$277.36
Layoff rate-Chicago	n.a.	0.5	0.4	0.5	0.2
Ordinary life insurance sales (in millions)	$1,347	$1,511	$1,476	$1,476	$1,272
Retail sales (in millions)	n.a.	$3,992[a]	$3,779	$4,011	$3,638
Coal production (in thousands)	$4,597	$5,535	$3,661	$5,600	$5,360
Petroleum production (in thousands)	$1,850	$1,930	$1,871	$1,825	$1,934
Vendor performance (percent)	51	55	60	70	66
Building permits (in thousands)					
Residential housing units	n.a.	4.54	3.74	5.47	6.35
Value of residential housing	n.a.	$191,514	$162,921	$234,120	$236,734
Value of nonresidential housing					
Industrial buildings	n.a.	$39,031	$55,019	$44,102	$28,472
Office, banks, and professional buildings	n.a.	$59,559	$57,941	$59,636	$43,604
Stores and other mercantile buildings	n.a.	$27,375	$36,932	$30,894	$21,807
Other	n.a.	$111,924	$98,707	$38,396	$31,850
Consumer price index					
North Central US	n.a.	120.3	n.a.	117.7	n.a.
North Central/population more than 4,000,000	n.a.	121.0	n.a.	118.2	n.a.
North Central/population 385,000 to 1,250,000	n.a.	120.5	n.a.	178.0	n.a.
North Central/population 75,000 to 385,000	n.a.	119.0	n.a.	116.8	n.a.
North Central/population less than 75,000	n.a.	119.5	n.a.	116.6	n.a.
Chicago	221.3	218.6	217.4	213.5	n.a.
St. Louis	222.2	n.a.	216.9	n.a.	n.a.
Farm prices	113	114	120	118	109
	1979:II	1979:I	1978:IV	1978:III	1978:II
Personal income (in millions)	$110,286	$106,920	$103,397	$101,587	$99,201
Total labor and proprietors' income by place of work					
By type					
Wage and salary disbursements	$ 71,737	$ 69,750	$ 67,259	$ 66,220	$ 64,871
Other labor income	7,466	7,084	6,817	6,714	6,514
Proprietors' income	7,185	6,867	6,464	6,342	6,639
Farm	2,027	1,725	1,349	1,477	1,806
Nonfarm	5,158	5,142	5,116	4,954	4,833
By industry					
Farm	2,339	2,025	1,630	1,757	2,080
Nonfarm	84,048	81,676	78,910	77,615	75,944
Private	73,168	71,033	68,831	67,672	66,397
Ag. Serv., for., fish., and other	197	188	180	177	175
Mining	918	881	880	851	779
Construction	4,821	4,752	4,634	4,574	4,461
Manufacturing	26,602	25,413	24,320	23,954	23,300
Nondurable goods	8,092	7,930	7,684	7,671	7,468
Durable goods	18,511	17,483	16,637	16,284	15,832
Transportation and public utilities	6,875	6,793	6,554	6,265	6,200
Wholesale trade	6,468	6,302	6,202	6,277	6,139
Retail trade	8,084	7,943	7,767	7,581	7,390
Finance, insurance, and real estate	5,255	5,149	5,045	5,008	4,918
Services	13,947	13,613	13,248	12,985	13,037
Government and government enterprises	10,880	10,643	10,080	9,943	9,546
Federal, civilian	1,811	1,795	1,783	1,735	1,725
Federal, military	524	513	507	496	507
State and local	8,545	8,335	7,790	7,712	7,315
Income by place of work					
Wage and salary disbursements	71,737	69,750	67,259	66,220	64,871
Farm	278	267	251	244	246
Ag. serv., for., fish., and other	123	116	111	108	106
Mining	707	680	680	662	605
Construction	3,925	3,840	3,716	3,670	3,586
Manufacturing	23,027	22,054	21,112	20,796	20,248
Nondurable goods	7,073	6,950	6,736	6,726	6,553
Durable goods	[illegible]	15,104	14,375	14,070	13,695
Transportation and public utilities	[illegible]	5,759	5,550	5,287	5,246
Wholesale trade	[illegible]	5,501	5,406	5,490	5,369
Retail trade	6,891	6,759	6,609	6,471	6,324
Finsnce, insurance, and real estate	[illegible]	4,053	3,942	3,931	3,868
Services	10,648	10,381	10,090	9,899	9,994
Government and government enterprises	[illegible]	10,340	9,792	9,660	9,279
Federal, civilian	[illegible]	1,715	1,704	1,658	1,649
Federal, military	[illegible]	513	507	496	507
State and local	[illegible]	8,111	7,581	7,507	7,123

Sources available upon request.
[a]preliminary. n.a. not available

Comparative Economic Data for Selected Illinois Cities, September 1979

	Building Permits (000)		Electric Power Consumption (000,000 kwh)		Postal Receipts (000)		Employment (000)		Estimated Work Force Unemployed (percent)	
	Sept. 1979	% change from Sept. 1978	Sept. 1979	% change from Sept. 1978	Sept. 1979	% change from Sept. 1978	Sept. 1979	% change from Sept. 1978	Sept. 1979	Sept. 1978
ILLINOIS	$142,521[a]	*+26.0*	3,592.5[a]	-7.6	$53,183[a]	*+0.1*	n.a.	n.a.	n.a.	n.a.
NORTHERN ILLINOIS										
Chicago	91,883	*+70.0*	1,740.1	*-7.0*	41,078	*-1.1*	n.a.	n.a.	n.a.	n.a.
Aurora	4,081	*-13.2*	135.8	*-14.6*	584	*-16.8*	n.a.	n.a.	n.a.	n.a.
Elgin	4,304	*+156.1*	92.2	*-26.1*	742	*+2.9*	n.a.	n.a.	n.a.	n.a.
Joliet	1,617	*-4.3*	376.0	*-6.2*	372	*-5.1*	n.a.	n.a.	n.a.	n.a.
Kankakee	309	*-38.6*	77.6[b]	*-6.2*	259	*+0.3*	n.a.	n.a.	n.a.	n.a.
Rock Island-Moline	5,838	*+202.9*	141.9[c]	*+2.1*	1,280	*-6.8*	n.a.	n.a.	n.a.	n.a.
Rockford	4,513	*+78.5*	163.9	*-4.1*	1,016	*+14.8*	n.a.	n.a.	n.a.	n.a.
CENTRAL ILLINOIS										
Bloomington-Normal	$ 10,005	*+159.1*	54.1	*-10.4*	$ 1,008	*+2.6*	n.a.	n.a.	n.a.	n.a.
Champaign-Urbana	2,934	*-82.6*	59.0	*-1.3*	774	*+4.4*	n.a.	n.a.	n.a.	n.a.
Danville	2,227	*+68.3*	47.3	*-4.6*	225	*-6.2*	n.a.	n.a.	n.a.	n.a.
Decatur	2,491	*-32.2*	138.1	*+1.8*	523	*+3.9*	n.a.	n.a.	n.a.	n.a.
Galesburg	241	*-68.5*	36.8[b]	*+4.2*	165	*-7.3*	n.a.	n.a.	n.a.	n.a.
Peoria	4,092	*+2.8*	195.2	*-15.3*	1,639	*+16.4*	n.a.	n.a.	n.a.	n.a.
Quincy	1,866	*+169.2*	45.4	*+2.2*	277	*+10.3*	n.a.	n.a.	n.a.	n.a.
Springfield	4,391	*-64.2*	111.4	*-12.9*	2,156	*+5.0*	n.a.	n.a.	n.a.	n.a.
SOUTHERN ILLINOIS										
East St. Louis	$ 235	*+422.2*	28.1	*-7.5*	$ 175	*-2.7*	n.a.	n.a.	n.a.	n.a.
Alton	569	*-56.0*	80.8	*-3.4*	139	*-6.0*	n.a.	n.a.	n.a.	n.a.
Belleville	566	*+42.5*	31.9	*-8.0*	395	*-9.4*	n.a.	n.a.	n.a.	n.a.
Carbondale-Murphysboro	359	*-56.2*	36.9	*-11.5*	376	*+25.7*	n.a.	n.a.	n.a.	n.a.

Sources available upon request.

[a]Total for cities listed. [b]Includes immediately surrounding territory. [c]Includes East Moline. n.a. not available

Since the Fed Action

The Federal Reserve System announced important changes in monetary management procedures on October 6. The discount rate was increased from 11 percent to 12 percent; reserve requirements were imposed on certain "managed liabilities" of member banks and Edge Act corporations, as well as those of United States branches and agencies of foreign banks. Moreover, Paul Volcker, the recently appointed chairman of the Board of Governors, announced that day-to-day operations of the Fed would henceforth be directed toward controlling monetary aggregates — such as bank reserves, the money supply, or total bank credit. Interest rates would be permitted to move to their market level, given the policy-determined rate of growth in monetary aggregates.

Nearly two months have elapsed, at this writing, since the announced change in Federal Reserve management procedures. However, more than a month was allowed before the changes became fully effective. Even so, the period has witnessed a marked change in several important financial indicators.

Slower Monetary Growth

The growth of the narrow money supply (M1) has slowed sharply since early October. Indeed, as the chart indicates, the money supply declined in the three weeks immediately following the policy change. In contrast, from spring to early October money expanded at more than a 10 percent annual rate.

The broad money supply (M2), which includes net time deposits, has also declined since early October (see chart). From spring to October this measure of money had expanded at nearly a 12 percent annual rate.

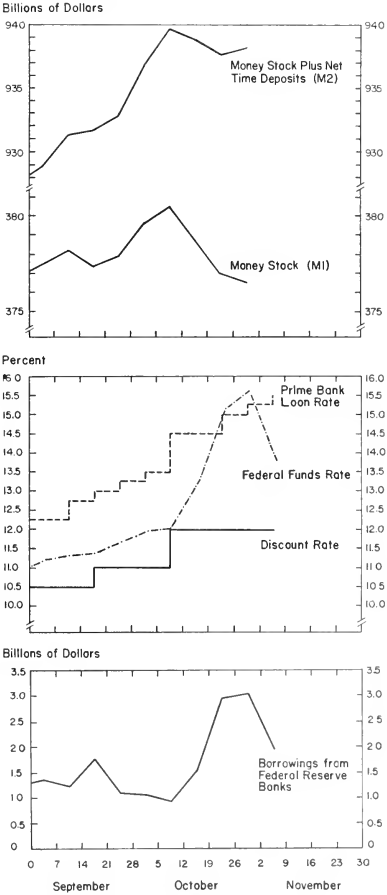
The declines in money reflect a reduction in bank lending. Business loans by large commercial banks have dropped sharply since early October. In turn, banks have found it necessary to cut back their lending because the Federal Reserve has reduced bank reserves and, as already stated, has increased reserve requirements.

The volume of bank reserves sets a limit on the size of bank liabilities — because banks must hold reserves in proportion to the size and composition of their liabilities. This role of bank reserves is sometimes difficult to understand — in that it runs counter to our normal understanding of the process. From the point of view of the individual bank, reserves are acquired as they accept deposits from their customers. Individual banks lend funds deposited by their customers. However, causation is reversed in considering the banking system as a whole. From this perspective, it is the Federal Reserve that determines the total volume of bank reserves. The Fed adds to bank reserves by purchasing government securities; it reduces bank reserves by selling securities. If the banking system receives injections of reserves it is in a position to make additional loans. Rising loans (assets to the banking system) cause rising bank deposits (liabilities to the banking system). Since early October, however, this process has been reversed.

Rising Interest Rates

Immediately following the Fed policy announcement, interest rates bolted upward (see chart). The prime rate,

Selected Financial Indicators



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the rate of interest banks charge their most credit-worthy corporate borrowers, rose immediately from 13.5 percent to 14.5 percent, then moved to a high of 15.75 percent. Most other interest rates — including all ranges of the maturity structure — also moved higher.

The federal funds rate skyrocketed following the Fed's October 6 announcement. The federal funds market is a market in which banks lend and borrow reserve balances. Federal funds were trading about 1 percentage point above the discount rate prior to its increase to 12 percent. Notwithstanding the increase, by the end of October, the federal funds rate was more than 3.5 percentage points above the discount rate. As a result, the Federal Reserve became an increasingly attractive source of funds. Borrowing from Federal Reserve banks rose from just under $1 billion in early October to more than $3 billion in late October (see chart).

Continued High Interest Rates

In recent weeks interest rates have backed off from highs reached in early November and member bank borrowing has edged downward. This development has contributed to speculation regarding whether interest rates have already peaked or whether they are likely to peak in the near-term future.

It is plausible to construe the recent interest rate declines as a short-term correction. Spurred by uncertainties generated by the Fed announcement, interest rates bolted somewhat above their equilibrium level. Over the longer term, interest rates are determined by the interplay between the supply and demand for credit. An important ingredient in this market process is the expected rate of inflation. As long as the basic rate of inflation remains near 10 percent, interest rates will remain near, or above, present levels. Interest rate declines over the longer term depend upon what happens to the rate of inflation.

It is not a foregone conclusion that restrictive monetary measures will affect the rate of inflation. For any measure to be effective it must, at length, impinge on the myriad pricing and wage-setting decisions through which the inflation process exerts itself. Aside from a short-term psychological impact of an announced policy change, presumably these price and wage decisions will be influenced over an extended period of time by persistent insufficient demand — that is, by slack markets. Here again, however, there is no solid presumption that wages and prices will stabilize. It is argued that major segments of the corporate and union structure have sufficient power to hold the line on prices — or increase them and, instead, cut production. In any event, even if the hoped-for effects of monetary restriction materialize, the economy must brace itself for a long wait.

Other Economic Developments

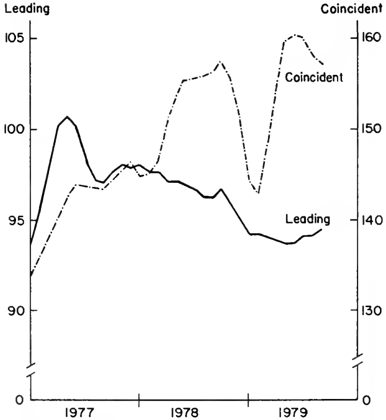
Meanwhile, the underlying economy continues to exhibit weakness. Although real GNP — that is, gross national product adjusted for changes in prices — rose in the third quarter, there has been essentially no net growth since the end of last year. Similarly, industrial production — the output of mines, factories and utilities — has registered little gain since last December. Housing starts, which averaged just over 2 million units last year, are down about 10 percent on average in 1979.

Reflecting the weakness in physical output, the growth in employment has slowed sharply since spring. Whereas total employment had been expanding at about a 4 percent annual rate during the last months of 1978 and the early months of this year, since March employment growth has averaged less than 2 percent. As a result, unemployment has moved higher.

Notwithstanding the weakening economy, the rate of inflation continues to be robust. For the year, consumer prices have risen at a 13.5 percent rate. Producer prices have also risen rapidly, as sharp increases in industrial prices have overwhelmed the relative stability in food prices.

WILLIAM R. BRYAN

Illinois Economic Indicators



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Our two indicators showed mixed results in September. The leading indicator scored a small gain, whereas the coincident indicator reported a slight decline. Average weekly hours in manufacturing rose by a small percentage on a seasonally adjusted basis. Vendor performance also increased slightly in September. Since data for retail sales, layoff rate, and building permits were not available at press time, the results presented here are tentative and may be subject to revision.

The Tokyo Round: Results and Implications

S. C. SCHMIDT

The General Agreement on Tariffs and Trade (GATT) provides the framework for negotiations to free international trade of tariffs and other trade barriers.

Since its establishment in 1947, GATT has been the forum for seven successive rounds of negotiations in which the level of tariffs on imports has been progressively reduced. The most recent initiatives, officially launched in September of 1973 and called the "Tokyo Round," were concluded five-and-one-half years later, on 12 April 1979.

The accords reached in the Tokyo Round are embodied in a large number of separate agreements that may be grouped under three areas: tariff reductions; multilateral agreements and arrangements on a number of nontariff measures; and other sectoral and nontariff agreements.

Tariff Reductions

The tariff reductions apply to over $125 billion in world trade in 1976 values and would cover a substantially higher amount now. The value in this context is measured by calculating the value of existing trade in tariff categories affected by the concessions. Industrial products accounted for most of tariff cuts covering $110 billion of trade. Reductions were also exchanged on nearly $15 billion of world trade in agricultural products, out of a total of $48 billion of farm trade in 1976.

Industrial Tariffs. Estimates of tariff concessions by the major developed countries suggest a one-third reduction in the level of industrial tariffs taken together; they average about 31 percent for the US, about 27 percent for the European Economic Community (EEC), about 28 percent for Japan which had much higher tariffs than others, and 34 percent for Canada.

Tariffs on raw materials are scheduled to drop 52 percent, rates on semimanufactured goods 30 percent, and customs duties on finished manufactures 33 percent. The largest reductions were made in fuels excluding petroleum, nonelectrical machinery, wood products, chemicals, and transport equipment. Less than average reductions were made in textiles and leather sectors.

Agricultural Trade Concessions. The US has reached bilateral agreements with 41 countries, including 19 developing nations. The US received concessions in the form of reduced tariffs and nontariff barriers of $4 billion. The main commodities benefiting from these concessions include soybeans, rice, and cotton, and a number of specialty products such as meats, tallow, tobacco, fresh and canned fruits and juices, vegetable oils, and protein meals.

The largest export gains, estimated at over $250 million, are expected to be in livestock and livestock products (Table 1). Tobacco exports are seen to increase by about $86 million and oilseeds by about $83 million as a result of trade concessions. Among major US exports, grains are expected to realize the smallest gains in sales. The increases are mainly in exports of feed grains to developing countries and in rice to the EEC.

Most of these concessions were granted by the United States's two chief trading partners — the EEC and Japan. The US has won greater access to the EEC market for about $970 million of farm commodities comprising beef, poultry, rice, tobacco, and fruit products. The EEC also committed itself not to raise tariffs on various products above their current rates bound under GATT. This binding is of importance for US soybeans which now enter the EEC market duty-free.

Japanese trade concessions covered agricultural exports of $1.3 billion (1976 base). The concessions were granted in the form of tariff cuts averaging about 35 percent from statutory rates and increases in import quotas. Tariff reductions that will be of interest to the US are those on fresh grapefruit, lemons, limes, almonds, raisins, beef offals, pork, and chicken legs. The two largest concessions to the US by Japan cover trade in beef offals and pork worth respectively about $108 million and $102 million in 1978. Expansion of import quotas for high-quality beef, oranges, and citrus juice will increase US export opportunities for these commodities. Japan has also committed itself not to raise tariffs on various products above current rates. These bindings, especially the current duty-free status of soybeans, will provide a continued unhindered access to the Japanese market for important US agricultural exports. Canadian concessions were

Table [illegible] Trade [illegible] of dollars)

Commodity	Nontariff trade barriers	Duty reductions	Total[a]
Livestock	[illegible]	[illegible]	[illegible]
Grains	[illegible]	[illegible]	[illegible]
Oilseed	[illegible]	[illegible]	[illegible]
Fruit vegetables	[illegible]	[illegible]	63,114
Tobacco	[illegible]	[illegible]	85,600
Total	[illegible]	104,09[illegible]	[illegible]

Source: US Department of Agriculture, FAS, *Foreign Agriculture* (Washington. July 1979), p. 8.

[a]The estimate of increased trade is based on full implementation of all the concessions. Implementation time will vary by commodities and countries. However, full implementation of all concessions is expected to occur at the latest by 1987.

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$422.5 million; of this, $412.6 million involved commodities for which tariffs were reduced. Among developing countries, the US has received offers of concessions from Mexico, the Philippines, Korea, India, and others.

The US has obtained improvements in access to foreign country markets by offering access to its own market; concessions were extended on agricultural imports valued at around $2.6 billion (1976 basis). About half were made to developed countries for fresh and frozen beef, lamb meat, wool, live cattle, and certain grain products. Most of the remainder is in vegetable oils, inedible molasses, fruits, vegetables, and preserved beef with concessions mainly to developing countries. Also, the US has raised import quotas on certain cheeses by 15 percent over 1978 levels. The imposition will put about 85 percent of US cheese imports under quota, compared with the current level of about 50 percent. The new trade bill which will implement the agreement reached in GATT negotiations will authorize the President to limit the amount of some cheeses entering the US in any year after 1979 to not more than 110,000 tons.

Multilateral Agreements and Arrangements

Agreements and arrangements were concluded aimed at the reduction or elimination of specific measures that distort trade or at more effective international control. These agreements are grouped under three categories: (1) framework for the conduct of world trade; (2) nontariff measures; and (3) agriculture.

The framework agreements are designed to achieve three broad objectives: the granting of special or more favorable treatment to goods traded by developing countries; codification of practices and procedures under which restrictive trade measures may be taken for balance-of-payments purposes or safeguard measures to help development; and to improve the legal framework for the conduct of trade. Of special importance to developing countries is that the agreement gives a permanent legal status to trade preferences granted by developed to developing countries or by developing countries to one another. As to improvements in the operation of the international trading system, the major achievements came in the revision of GATT's procedures for settlement and surveillance of trade disputes.

Nontariff Measures. The number and diversity of nontariff barriers made it impossible to find a general solution for their treatment or to dispose of them altogether. As a start, action was taken on a selected number of barriers that fall into five categories.

The customs valuation code eliminates the use of widely varying and arbitrary assessment methods, some designed to keep out foreign products. It establishes a uniform set of international rules for customs valuation purposes making imported goods dutiable on an ad valorem basis. For the US the application of the new code will require the abandonment of the selling price customs valuation system. While this change is expected to help US exporters and importers, it will have no major impact on US agricultural trade.

The government procurement code is designed to discourage discrimination against foreign suppliers when governments purchase articles for their own use. Essentially, it opens up government procurement contracts to international bidding through agreed nondiscriminatory procedures and practices. On the whole, the application of this code is estimated to provide US access to about $20 billion. Because agricultural procurement programs are excluded from the regulation the code will have little or no impact on US agriculture.

The code on import licensing simplifies the procedures for the issue of licenses and seeks to eliminate their import-restrictive effects regardless of the way or purpose of application. The US import licensing procedure is in accord with the code.

The subsidies and countervailing duties code sets out the conditions and obligations covering the application of such practices and provides a mechanism for dispute settlement. The code bans subsidies on exports of manufactured products and minerals and stiffens rules for their application on exports of agricultural and other primary products. Basically this code aims at reducing the danger of losing traditional markets by exporting countries because of subsidized competition.

Subsidized competition in export markets has been especially keen for such commodities as wheat, flour, barley, oilseeds, dairy products, and vegetable oils. US agricultural exports stand to gain from the tightening of rules on the use of export subsidies in the world market.

On countervailing duties, the code made no substantive changes in existing GATT regulation. New elements are the establishment of special procedures for settlement of disputes about injury to the domestic industry, and more precise definitions of material injury and of casualty. The new code retains the right of self-defense of importing countries against injuries by subsidized import competition in their home markets.

On technical barriers to trade the code sets out rules of conduct on product standards, product testing, and product certification systems. It establishes dispute settlement procedures, secures reviews of complaints, and sets rules for the redress of violations. The code applies to both agricultural and industrial products. Special temporary exceptions are provided where questions of public safety, health, environmental protection, or national security are involved.

Agricultural Arrangements. Plans to conclude comprehensive multilateral agreements covering wheat, dairy, and meat trade did not materialize. Only consultative arrangements were established for the regulation of trade in bovine meat and dairy products.

The arrangement on bovine meat provides for the expansion and stabilization of international trade in beef, veal, and live cattle. This is to be achieved by the progressive dismantling of trade restrictions and improvement of international cooperation in this sector. Beef-exporting and -importing countries will participate in an international meat council, established within GATT, to serve as a forum for regular consultation on matters affecting international trade in beef products and live cattle. The council will make recommendations of pos-

sible remedial measures for problems that may arise for participants. Developed countries offered technical assistance for developing countries, if needed, to improve their meat sector.

The international dairy arrangement calls for an expansion and liberalization of world trade in all dairy products; achievement of greater stability in this trade; mitigations of fluctuations in prices and supplies; and encouragement of developing countries to participate in the expansion. The arrangement has three protocols containing specific provisions, including minimum prices, for international trade in (1) certain milk powders; (2) milk fats including butter; and (3) certain cheeses. To implement it an international dairy products council is to be established within GATT. The council will hold consultations on problems needing resolution among participants. Developed countries agreed to provide technical assistance to developing countries and committed themselves to make dairy products available to developing countries as food aid.

The protocol on milk powder sets rules on how Australia, New Zealand, EEC, Canada, and other countries will export powdered milk for use as animal feed under a control system.

Other Sectoral and Nontariff Agreements

An important agreement has been reached under the heading, *Trade in Civil Aircraft,* signed by Canada, EEC, Japan, Sweden, and the US. The signatories are committed to eliminate by 1 January 1980 all customs duties and similar charges and all import restrictions on civil aircraft.

Another category of agreements was grouped under the heading of *Amendments of the Antidumping Code* signed by 10 of the participants in the multilateral trade negotiations. It updates provisions on the determination of injury; price undertakings between exporters and the importing country; and the imposition and collection of antidumping duties with the relevant provisions of the code on subsidies and countervailing duties.

Implementation Schedule

The agreements concluded in the negotiations require legislative approval. With the passage of the Trade Act of 1979 in July, Congress approved the Tokyo Round package. The protocol will be open for acceptance by the participants until 30 June 1980. It will go into force on 1 January 1980 for participants who have ratified it before that date. The tariff cuts will be phased in mostly over an eight-year period starting 1 January 1980 with the total reduction to become effective no later than 1 January 1987. Participants, however, have the option of implementing reductions at earlier stages. Developing signatory countries may delay application of tariff reduction schedules and the adoption of new codes of behavior to limit nontariff distortions of trade.

Implications of Results

Expected Gains. The negotiations have opened up new trading opportunities that can yield broadly based benefits to certain sectors of the economies of signatory countries. In principle, benefits could materialize in terms of (1) consumption gains in lower costs or a greater availability of products; (2) production gains by providing an incentive for making investments and greater confidence in production decisions; and (3) a more competitive and efficient domestic economy by exposing national producers to desirable competitive influences.

With respect to tariff cuts the negotiations fell short of expectations because the agreed-on reductions averaged only about half of the 60 percent target the US had set. Moreover, because of the long implementation period, the impact of the modest tariff reductions will be gradual and hence the net effect on the US balance of trade, employment, and prices rather small.

The benefits of the reduction on nontariff barriers are difficult to assess. Benefits should come from a greater degree of control over export subsidies and the application of import licensing, customs valuation, and performance standard procedures.

It remains to be seen whether the new subsidies code can be enforced so that unfair trade advantages created through the use of subsidies, especially in markets for grains, can be eliminated. Given the inherent efficiency of its agriculture, the US will have far more to gain than lose from the reduction of trade barriers in a number of markets. Overall, agriculture is expected to benefit more from the reduction of specific nontariff barriers than from tariff concessions. Estimates are that the benefits to the US from the concessions may be equivalent to an increase in the value of total output of \$1.0–\$1.5 billion per year in current prices.

Developed-developing country relations are likely to be a central concern of trade policy in the 1980s. A widening of the split between developed and developing countries could tempt the developing countries to establish the UN Conference on Trade and Development as the future major trade policy forum, supplanting GATT.

There is considerable fear that with high levels of inflation, lingering recessions, and balance-of-payments deficits, the benefits of restrictive trade measures will become irresistible to governments in both advanced and developing countries. The developing countries fear that access to industrialized country markets for their products will continue to be limited.

Unsettled Issues. Notwithstanding the gains in trade liberalization, there is room also for improvements in several areas: (1) further reductions of tariffs by industrialized countries; (2) more progress in removing specific quantitative restrictions; (3) resolution of the rules on emergency safeguard action against disruptive imports; and (4) clarification of GATT rules, especially on dispute settlement including definition of the role of the GATT secretariat in this process.

A major failure of the multilateral trade negotiations was its inability to reconcile divergent views on the rules of emergency or escape clause actions against disruptive imports. Under the present GATT system a nation may only restrict imports of a product on an across-the-board basis from all foreign suppliers instead of just the country disrupting the market. However, this rule was in the

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Table 2 Percentage Reduction of 10 Markets' Tariffs Combined Assessment for Products of Interest to Developing Countries

	Calculated on the weighted average	Calculated on the simple average
Industry (excluding petroleum)	26%	37%
Raw materials	59	32
Semimanufactures	27	32
Finished manufactures	24	39
Agricultural tropical products	12	7

Source GATT, Press Release, GATT/1234 (Geneva, 12 April 1979), p. 8

past largely evaded by euphemistically termed "voluntary export restraints."

Developing countries feel that their needs and interests received less attention than desirable at the multilateral trade negotiations. The results not only fell short in correcting the unfavorable trading position of the developing countries but also in ensuring improved access to markets for their exports. In particular, tariffs were neither reduced on all products in which they have an interest, nor were tariff cuts deeper than those to which the general formula was applied (Table 2). Also in the areas where the developing countries have achieved substantial export potentials, such as textiles and footwear, restrictions by industrial countries have not been mitigated. It should be noted, however, that the lower-than-average overall cut in tariff rates is due, in part, to reduced rates already applied on products eligible for the generalized system of preferences.

Summary and Conclusions

The key issues in negotiations centered on the gaining of an improved international framework of rules and procedures for conduct of world trade. Improved access to markets was sought through the reduction of tariff and nontariff barriers. The agreements in relation to tariffs provide for a one-third reduction in the level of industrial tariffs and for a 41 percent reduction of agricultural tariff rates on products on which concessions were exchanged. The US is committed to reduce by 31 percent its industrial tariffs, the EEC by 27 percent, and Japan by 28 percent.

Although the size of tariff cuts appears substantial, the value amounts to the cuts are relatively small. Moreover, most will be phased in over eight years beginning 1 January 1980. In the case of sensitive products such as textiles and steel, the tariff reduction program will begin later in 1982. Therefore, trade expansion will be a gradual process without any major and abrupt impact on production and employment.

The US received concessions in the form of reduced tariffs and nontariff barriers on $4 billion of agricultural exports. It has won greater access to Europe and Japan for its high-quality beef, pork, poultry, meat, tobacco, citrus fruits, and oilseeds. Concessions extended by the EEC cover US agricultural exports of $970 million and those made by Japan are $1.3 billion. In exchange the US gave concessions on agricultural imports valued at around $2.6 billion. These concessions involved beef, lamb, meat, live cattle, inedible molasses, fruits, vegetables, and the raising of import quotas on certain cheeses. Eventually, US agricultural exports are expected to increase by some $510 million annually as a result of trade concessions made during the Tokyo Round. Concessions by the US are worth about $106 million annually. Thus, the net improvement in our agricultural trade balance from the Tokyo Round may amount to a modest increase of about $400 million (1976 values).

On nontariff barriers, the new codes of conduct covering a wide range of measures could turn out to be the most significant achievement. In particular, they are capable of doing much to remove or reduce and to bring under continuous surveillance and control a number of the most trade-distorting nontariff measures.

A major failure of the Tokyo Round was the inability of participants to reach agreement on the use of safeguards under which imports that threaten a domestic injury can be temporarily restricted. Overall the results of the multinational negotiations are less substantial than was initially expected, partly because of modest progress on agriculture and on a number of nontariff barriers. Trade in beef and dairy products is to be regulated by international consultative arrangements under GATT. It was not possible to reach an agreement in the cereal sector. The Tokyo Round is only a beginning in dealing with complex protectionist measures likely to persist for many years to come.